

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9723	9694		3.04	1.0E-33	AF003528.1	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
9754	19278	25229	1.34	1.0E-33	AV727809.1	EST_HUMAN	AV727809 HTC Homo sapiens cDNA clone HTCCNC12 5'
9927	19399		2.09	9.0E-34	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
1427	11332	21198	1.98	7.0E-34	T70845.1	EST_HUMAN	yd15e05.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:108320 5'
9340	19020		3.08	7.0E-34	H12866.1	EST_HUMAN	yj14c10.r1 Soares placenta Nb2-HP Homo sapiens cDNA clone IMAGE:148722 5'
463	10406	20225	1.46	6.0E-34	U10991.1	NT	Human G2 protein mRNA, partial cds
463	10406	20226	1.46	6.0E-34	U10991.1	NT	Human G2 protein mRNA, partial cds
9153	18903	26340	1.44	6.0E-34	U03686.1	NT	Mus musculus DAB/2J hair-specific (hac1-) gene
1837	11734		2.23	5.0E-34	7706500	NT	Homo sapiens Npw38-binding protein NpwBP (LOC51729), mRNA
4993	14688	24631	4	5.0E-34	U30883.1	NT	Human splicing factor SRp55-1 (SRp-55) mRNA, complete cds
7144	17021	27215	1.18	5.0E-34	AF078779.1	NT	Rattus norvegicus putative four repeat ion channel mRNA, complete cds
8046	17937	28186	2.12	5.0E-34	AB037856.1	NT	Homo sapiens mRNA for KIAA1435 protein, partial cds
8578	18446		2.01	5.0E-34	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
1953	11848	21735	2.11	4.0E-34	AI804867.1	EST_HUMAN	tt94c06.x1 NCI_CGAP_P28 Homo sapiens cDNA clone IMAGE:2249194 3'
2887	12552	22441	0.98	4.0E-34	8922807	NT	Homo sapiens hypothetical protein FLJ10989 (FLJ10989), mRNA
8492	18365		4.81	3.0E-34	BF035327.1	EST_HUMAN	60145853.F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3862086 5'
1488	11393	21254	8.56	1.0E-34	P12236	SWISSPROT	ADP-ATP CARRIER PROTEIN, LIVER ISOFORM T2 (ADP/ATP TRANSLOCASE 3) (ANT 3)
3621	13535	23320	1.46	1.0E-34	AF003528.1	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
3979	13886	23661	0.78	1.0E-34	AY009397.1	NT	Homo sapiens WNT3 precursor (WNT3) mRNA, complete cds
3979	13886	23662	0.78	1.0E-34	AY009397.1	NT	Homo sapiens WNT3 precursor (WNT3) mRNA, complete cds
4381	14277		4.02	1.0E-34	BE071414.1	EST_HUMAN	RC2-BT0506-240400-016-h08 BT0506 Homo sapiens cDNA
4920	14799		0.86	1.0E-34	AW845706.1	EST_HUMAN	MR0-CT0068-280999-002-d11 CT0068 Homo sapiens cDNA
5731	15639	25743	1.99	1.0E-34	BE874052.1	EST_HUMAN	601484430.F1 NIH_MGC_69 Homo sapiens cDNA clone IMAGE:3886999 5'
5731	15639	25744	1.99	1.0E-34	BE874052.1	EST_HUMAN	601484430.F1 NIH_MGC_69 Homo sapiens cDNA clone IMAGE:3886999 5'
7155	17032	27226	3.87	1.0E-34	AW368451.1	EST_HUMAN	CM4-HT0193-081099-022-g06 HT0193 Homo sapiens cDNA
7591	17442	27658	8.89	1.0E-34	AL036635.1	EST_HUMAN	DKFZp564A1563_r1 564 (synonym: hfbf2) Homo sapiens cDNA clone DKFZp564A1563 5'
9746	19307		2.92	1.0E-34	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
3594	13508	23296	1.26	9.0E-35	AW663302.1	EST_HUMAN	hh77b06.y1 NCI_CGAP_GU1 Homo sapiens cDNA clone IMAGE:2968787 5'
219	10189		24.25	8.0E-35	6031190	NT	Homo sapiens prohibitin (PHB) mRNA
1703	11604	21475	3.3	8.0E-35	BF598937.1	EST_HUMAN	naa33a08.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3258134 3' similar to TR:075912 O75912 DIACYLGLYCEROL KINASE IOTA. ;

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1703	11604	21476	3.3	8.0E-35	BF589937.1	EST_HUMAN	naa33a08.x1 NCL CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3258134 3' similar to TR:O75912
4761	14646	24435	3.09	8.0E-35	BF183195.1	EST_HUMAN	O75912 DIACYLGLYCEROL KINASE IOTA. ;
8075	17966	28217	3	8.0E-35	BE379480.1	EST_HUMAN	601809588F1 NIH_MGC_18 Homo sapiens cDNA clone IMAGE:4040324 5'
9265	18909		3.49	8.0E-35	BF569282.1	EST_HUMAN	601236468F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3608513 5'
5905	15811	25937	1.52	7.0E-35	11425417	NT	602184624T1 NIH_MGC_42 Homo sapiens cDNA clone IMAGE:4300660 3'
1391	11296	21154	1.28	6.0E-35	AA757115.1	EST_HUMAN	Homo sapiens phosphatidylinositol glycan, class L (PIGL), mRNA
1925	11820	21699	1.78	6.0E-35	6005975	NT	ah63h03.s1 Soares_testis_NHT Homo sapiens cDNA clone 1309397 3'
6610	16490	26676	3.6	6.0E-35	6005921	NT	Homo sapiens zinc finger protein 208 (ZNF208), mRNA
7698	17548	27771	2.7	6.0E-35	AB037786.1	NT	Homo sapiens triple functional domain (PTPRF interacting) (TRIO), mRNA
1681	11583	21454	2.29	5.0E-35	X63392.1	NT	Homo sapiens mRNA for KIAA1365 protein, partial cds
							H.sapiens immunoglobulin kappa light chain variable region L14
4311	14208	23992	2.2	5.0E-35	AF023268.1	NT	Homo sapiens clk2 kinase (CLK2), propin1, cote1, glucocerebrosidase (GBA), and metaxin genes, complete cds; metaxin pseudogene and glucocerebrosidase pseudogene; and thrombospondin3 (THBS3) gene, partial cds
6761	16640		3.14	5.0E-35	BE890992.1	EST_HUMAN	601431984F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3917229 5'
6779	16658	26848	2.18	5.0E-35	AL208765.1	EST_HUMAN	qg38c05.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1837448 3' similar to SW:Y249_HUMAN Q92539 HYPOTHETICAL PROTEIN KIAA0249. ;
6779	16658	26849	2.18	5.0E-35	AL208765.1	EST_HUMAN	qg38c05.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1837448 3' similar to SW:Y249_HUMAN Q92539 HYPOTHETICAL PROTEIN KIAA0249. ;
8517	18389		3.42	5.0E-35	AA001786.1	EST_HUMAN	zh84f12.r1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:428015 5'
1415	11321	21186	14.91	4.0E-35	BE257907.1	EST_HUMAN	601109719F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3350405 5'
1776	11675	21552	5.1	4.0E-35	H91193.1	EST_HUMAN	yv98a07.r1 Soares_fetal_liver_spleen_1NFLS Homo sapiens cDNA clone IMAGE:241236 5' similar to contains PTR5 repetitive element ;
5042	14914		1.29	4.0E-35	BE409102.1	EST_HUMAN	601300705F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3335401 5'
6280	16144		1.82	4.0E-35	BE3550127.1	EST_HUMAN	h09g01.x1 NCL CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3146256 3' similar to contains MER29.B3
6957	16635	27030	6.84	4.0E-35	AL046596.1	EST_HUMAN	MER29 repetitive element ;
1561	11466	21324	9.63	3.0E-35	BE268182.1	EST_HUMAN	DKFZp434L148_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434L148 5'
2283	12167		2.42	3.0E-35	AF224492.1	NT	601125260F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3345063 5'
4793	14678	24465	1.06	3.0E-35	BF376402.1	EST_HUMAN	Homo sapiens phospholipid scramblase 1 gene, complete cds
5275	15197	24971	22.73	3.0E-35	BF433100.1	EST_HUMAN	MR1-TN0045-130900-010-e01 TN0045 Homo sapiens cDNA
							7n25a09.x1 NCL CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3565361 3' similar to TR:Q9QZH7
5275	15197	24972	22.73	3.0E-35	BF433100.1	EST_HUMAN	Q9QZH7 F-BOX PROTEIN FBL2. ;
							7n25a09.x1 NCL CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3565361 3' similar to TR:Q9QZH7

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7465	17325		1.81	3.0E-35	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
103	12659	19902	1.74	2.0E-35	N88965.1	EST_HUMAN	K6932F Human fetal heart, Lambda ZAP Express Homo sapiens cDNA clone K6932 5' similar to REPETITIVE ELEMENT
1171	11083	20928	1.25	2.0E-35	T11909.1	EST_HUMAN	A971F Heart Homo sapiens cDNA clone A971
2171	12058	21961	5.2	2.0E-35	AB018413.1	NT	Homo sapiens mRNA for Gab2, complete cds
3272	13193	22991	0.97	2.0E-35	6912459	NT	Homo sapiens Grb2-associated binder 2 (KIAA0571), mRNA
3272	13193	22992	0.97	2.0E-35	6912459	NT	Homo sapiens Grb2-associated binder 2 (KIAA0571), mRNA
3511	13427		0.88	2.0E-35	AB020702.1	NT	Homo sapiens mRNA for KIAA0895 protein, partial cds
3835	13747	23539	1.09	2.0E-35	BE247575.1	EST_HUMAN	TCBAP2E4328 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBAP4328
3835	13747	23540	1.09	2.0E-35	BE247575.1	EST_HUMAN	TCBAP2E4328 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBAP4328
4570	14462		2.55	2.0E-35	H49239.1	EST_HUMAN	yt19a12.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:274079 5'
5426	15347	25401	1.66	2.0E-35	BF332417.1	EST_HUMAN	QV0-BT0701-210400-199-b04 BT0701 Homo sapiens cDNA
8175	18083	28312	3.72	2.0E-35	X59417.1	NT	H. sapiens PROS-27 mRNA
9028	13193	22991	1.36	2.0E-35	6912459	NT	Homo sapiens Grb2-associated binder 2 (KIAA0571), mRNA
9028	13193	22992	1.36	2.0E-35	6912459	NT	Homo sapiens Grb2-associated binder 2 (KIAA0571), mRNA
9205	18936	25354	1.51	2.0E-35	BE904978.1	EST_HUMAN	601496774F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3898699 5'
9205	18936	25355	1.51	2.0E-35	BE904978.1	EST_HUMAN	601496774F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3898699 5'
9725	19284		3.97	2.0E-35	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
9832	12659	19902	4.17	2.0E-35	N88965.1	EST_HUMAN	K6932F Human fetal heart, Lambda ZAP Express Homo sapiens cDNA clone K6932 5' similar to REPETITIVE ELEMENT
40	10028	19828	4.38	1.0E-35	AA631949.1	EST_HUMAN	fmfc16 Regional genomic DNA specific cDNA library Homo sapiens cDNA clone CR12-1
40	10028	19829	4.38	1.0E-35	AA631949.1	EST_HUMAN	fmfc16 Regional genomic DNA specific cDNA library Homo sapiens cDNA clone CR12-1
735	10667	20500	44.43	1.0E-35	AW389473.1	EST_HUMAN	IL2-ST0162-131099-008-d12 ST0162 Homo sapiens cDNA
735	10667	20501	44.43	1.0E-35	AW389473.1	EST_HUMAN	IL2-ST0162-131099-008-d12 ST0162 Homo sapiens cDNA
891	10817		1.16	1.0E-35	T87947.1	EST_HUMAN	yd89a01.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:115752 5' similar to SP:A44282 A44282 RETROVIRUS-RELATED POL POLYPROTEIN - HUMAN ;
2495	12389	22262	2.31	1.0E-35	7705994	NT	Homo sapiens hypothetical protein (LOC51233), mRNA
2740	12602	22496	1.11	1.0E-35	BE350127.1	EST_HUMAN	h09g01.x1 NCJ_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3146256 3' similar to contains MER29.b3 MER29 repetitive element ;
2740	12602	22497	1.11	1.0E-35	BE350127.1	EST_HUMAN	h09g01.x1 NCJ_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3146256 3' similar to contains MER29.b3 MER29 repetitive element ;

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3104	13030	22826	1.07	1.0E-35	6006030	NT	Homo sapiens transcription elongation factor B (SIII), polypeptide 1-like (TCEB1L) mRNA
3126	13051	22848	2.2	1.0E-35	AV650422.1	EST_HUMAN	AV650422 GLC Homo sapiens cDNA clone GLOCCE06 3'
3126	13051	22849	2.2	1.0E-35	AV650422.1	EST_HUMAN	AV650422 GLC Homo sapiens cDNA clone GLOCCE06 3'
4325	14222	24003	4.7	1.0E-35	7656905	NT	Mus musculus activin receptor interacting protein 1 (Arip1-pending), mRNA
4325	14222	24004	4.7	1.0E-35	7656905	NT	Mus musculus activin receptor interacting protein 1 (Arip1-pending), mRNA
5382	15301	25154	1.43	1.0E-35	11526236	NT	Homo sapiens chromatin assembly factor 1, subunit B (p60) (CHAF1B), mRNA
7501	19489	27578	2	1.0E-35	AU158595.1	EST_HUMAN	AU158595 PLACE3 Homo sapiens cDNA clone PLACE3000382 3'
7501	19489	27579	2	1.0E-35	AU158595.1	EST_HUMAN	AU158595 PLACE3 Homo sapiens cDNA clone PLACE3000382 3'
8977	18782		4.16	1.0E-35	AI525119.1	EST_HUMAN	promina-7 D01.r bvtumor Homo sapiens cDNA 5'
9186	12369	22262	1.99	1.0E-35	7705994	NT	Homo sapiens hypothetical protein (LOC51233), mRNA
9267	18971		1.37	1.0E-35	11418110	NT	Homo sapiens casein kinase 1, epsilon (CSNK1E), mRNA
9620	19198		2.25	1.0E-35	BE792832.1	EST_HUMAN	601584833F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3938985 5'
2900	12827	22622	0.94	7.0E-36	AW657579.1	EST_HUMAN	GM1-CT0315-091299-063-d07 CT0315 Homo sapiens cDNA
3080	13007		4.03	7.0E-36	4557498	NT	Homo sapiens C-terminal binding protein 2 (CTBP2), mRNA
6512	16371	26548	6.04	7.0E-36	U06672.1	NT	Human carcinoembryonic antigen gene family member 12 (CGM12) gene, exons L and L/N
6512	16371	26549	6.04	7.0E-36	U06672.1	NT	Human carcinoembryonic antigen gene family member 12 (CGM12) gene, exons L and L/N
9423	19071	25279	5.23	7.0E-36	AF052051.1	NT	Homo sapiens glutathione transferase A4 gene, exon 1
1959	11854	21741	1.88	6.0E-36	7706622	NT	Homo sapiens nihjurin 2 (NINJ2), mRNA
2367	12247		6.17	6.0E-36	AB035346.1	NT	Homo sapiens TCE6 gene, exon 12
3587	13501	23290	0.91	6.0E-36	BF515101.1	EST_HUMAN	UH-BW1-anv-c-12-0-JL.s1 NCI_CGAP_Sub7 Homo sapiens cDNA clone IMAGE:3083542 3'
5268	15190	24965	19.79	6.0E-36	AI435169.1	EST_HUMAN	th93b06.x1 Soares NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2126195 3' similar to gb:M11949 PANGREATIC SECRETORY TRYPSIN INHIBITOR PRECURSOR (HUMAN);
6221	16037	26237	3.34	6.0E-36	AW780143.1	EST_HUMAN	ho08h02.x1 NCI_CGAP_Co14 Homo sapiens cDNA clone IMAGE:3036827 3' similar to SW:IMA2_HUMAN
7027	16904	27096	2.21	6.0E-36	AF208161.1	NT	P52292 IMPORTIN ALPHA-2 SUBUNIT;
8833	18646	28931	2.74	6.0E-36	AI380499.1	EST_HUMAN	tf95c09.x1 NCI_CGAP_CLL1 Homo sapiens cDNA clone IMAGE:2107024 3' similar to contains MER9.b2
9821	19580	25071	1.69	6.0E-36	BE737154.1	EST_HUMAN	MER9 repetitive element;
133	10107	19928	6.69	5.0E-36	AJ271735.1	NT	601305064F1 NIH_MGC_39 Homo sapiens cDNA clone IMAGE:3639782 5'
2722	12584	22478	7.71	5.0E-36	BE388436.1	EST_HUMAN	Homo sapiens Xq pseudautosomal region, segment 1/2
3561	13475	23264	1.96	5.0E-36	AL163209.2	NT	601285567F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3607289 5'
4678	14564	24358	1.42	5.0E-36	5729729	NT	Homo sapiens chromosome 21 segment HS21C009
4678	14564	24359	1.42	5.0E-36	5729729	NT	Homo sapiens API5-like 1 (API5L1), mRNA
9026	10107	19928	2.64	5.0E-36	AJ271735.1	NT	Homo sapiens API5-like 1 (API5L1), mRNA
							Homo sapiens Xq pseudautosomal region, segment 1/2

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9318	19010	25337	2.36	5.0E-36	11417862	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
1205	11115	20961	1.43	4.0E-36	BE010038.1	EST_HUMAN	PM3-BN0176-100400-001-g04 BN0176 Homo sapiens cDNA
1424	11329	21196	1.54	4.0E-36	P10286	SWISSPROT	RETROVIRUS-RELATED POLYPROTEIN [CONTAINS: REVERSE TRANSCRIPTASE ; ENDONUCLEASE]
1626	11530	21389	1.58	4.0E-36	BE382574.1	EST_HUMAN	601298574F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:3628386 5'
2175	12062		1.63	4.0E-36	AW247772.1	EST_HUMAN	2820020.5prime NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2820020 5'
3310	13231	23036	3.21	4.0E-36	BE389299.1	EST_HUMAN	601282266F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3604168 5'
3310	13231	23037	3.21	4.0E-36	BE389299.1	EST_HUMAN	601282266F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3604168 5'
5693	15602	25704	2.21	4.0E-36	11497041	NT	Homo sapiens a disintegrin and metalloproteinase domain 22 (ADAM22), transcript variant 3, mRNA
6511	16370	26547	1.74	4.0E-36	M33320.1	NT	Human platelet Glycoprotein IIb (GP1Ib) gene, exons 2-29
6979	16856	27050	1.41	4.0E-36	D87675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
6979	16856	27051	1.41	4.0E-36	D87675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
8356	18233	28481	2.19	4.0E-36	AA400370.1	EST_HUMAN	zu69c10.r1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:749250 5'
9334	19015		1.31	4.0E-36	11420516	NT	Homo sapiens nuclear factor of activated T-cells, cytoplasmic 2 (NFATC2), mRNA
9380	19545		2.85	4.0E-36	AV753629.1	EST_HUMAN	AV753629 TP Homo sapiens cDNA clone ITPGABH01 5'
681	10614	20437	2.73	3.0E-36	AF099810.1	NT	Homo sapiens neuroxin II-alpha gene, partial cds
2252	12136	22033	0.89	3.0E-36	7662401	NT	Homo sapiens KIAA0952 protein (KIAA0952), mRNA
4402	14297	24081	5.15	3.0E-36	10181139	NT	Mus musculus junctophilin 1 (Jp1-pending), mRNA
8452	18325	28584	1.78	3.0E-36	BF035327.1	EST_HUMAN	601458531F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3862086 5'
3132	13057	22857	2.7	2.0E-36	BE259267.1	EST_HUMAN	601106343F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3342706 5'
4877	14757	24534	4.62	2.0E-36	AW880376.1	EST_HUMAN	QV0-O T0030-240300-174-h04 OT0030 Homo sapiens cDNA
5371	15291	25127	2.16	2.0E-36	AF267747.1	NT	Mus musculus p47-phox gene, complete cds
5567	15483	25556	3.99	2.0E-36	T08756.1	EST_HUMAN	EST06648 Infant Brain, Bento Soares Homo sapiens cDNA clone HIBBJ28 5' end
5962	15867	25989	11.82	2.0E-36	T66629.1	EST_HUMAN	yc44a07.r1 Stratagene liver (#937224) Homo sapiens cDNA clone IMAGE:83508 5'
867	10793	20943	1.9	1.0E-36	BE409310.1	EST_HUMAN	601300388F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3635480 5'
2098	11987	21884	0.86	1.0E-36	BE146523.1	EST_HUMAN	RC1-H T0217-131199-021-h07 HT0217 Homo sapiens cDNA
2098	11987	21885	0.86	1.0E-36	BE146523.1	EST_HUMAN	RC1-H T0217-131199-021-h07 HT0217 Homo sapiens cDNA
2155	12043	21942	1.31	1.0E-36	BF673761.1	EST_HUMAN	602136493F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4272886 5'
5752	15660		5.94	1.0E-36	A1867714.1	EST_HUMAN	wb37c12.x1 NCI CGAP GC6 Homo sapiens cDNA clone IMAGE:2307862 3' similar to contains Alu repetitive element;
5640	16520	26711	2.03	1.0E-36	AA148034.1	EST_HUMAN	zo51a12.r1 Stratagene endothelial cell 937223 Homo sapiens cDNA clone IMAGE:590398 5'
6640	16520	26712	2.03	1.0E-36	AA148034.1	EST_HUMAN	zo51a12.r1 Stratagene endothelial cell 937223 Homo sapiens cDNA clone IMAGE:590398 5'
7220	17097	27287	2.84	1.0E-36	AW103658.1	EST_HUMAN	xe82b07.x1 NCI CGAP Brn35 Homo sapiens cDNA clone IMAGE:2614357 3'
7824	17674	27917	4.06	1.0E-36	BF364169.1	EST_HUMAN	QV3-NN1023-010600-199-h01 NN1023 Homo sapiens cDNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8317	18194	28444	3.43	1.0E-36	AW897636.1	EST_HUMAN	CM3-NN0061-140400-147-112 NN0061 Homo sapiens cDNA
8666	18574	28857	3.91	1.0E-36	AW504143.1	EST_HUMAN	UI-HF-BNO-ale-c-03-0-UJ_r1 NIH_MGC_50 Homo sapiens cDNA IMAGE:3079277 5'
9203	18934		3.74	1.0E-36	11418177	NT	Homo sapiens Ran GTPase activating protein 1 (RANGAP1), mRNA
9374	19040	25305	1.29	1.0E-36	11418121	NT	Homo sapiens chromosome 22 open reading frame 2 (C22ORF2), mRNA
9647	19214		3.07	1.0E-36	AL163213.2	NT	Homo sapiens chromosome 21 segment HS21C013
9890	19371		2.89	1.0E-36	AF202723.1	NT	Homo sapiens Sad1 unc-84 domain protein 2 (SUN2) mRNA, partial cds
6368	16231	26390	1.96	9.0E-37	AW009277.1	EST_HUMAN	ws80b07.x1 NCI_CGAP_Co3 Homo sapiens cDNA clone IMAGE:2504245 3'
6368	16231	26391	1.96	9.0E-37	AW009277.1	EST_HUMAN	ws80b07.x1 NCI_CGAP_Co3 Homo sapiens cDNA clone IMAGE:2504245 3'
9462	19093		2.79	9.0E-37	W22618.1	EST_HUMAN	73D4 Human retina cDNA Tsp509I-cleaved sublibrary Homo sapiens cDNA not directional
5143	15010	24781	1.38	8.0E-37	AB020684.1	NT	Homo sapiens mRNA for KIAA0877 protein, partial cds
5213	15136		1.7	8.0E-37	BE698077.1	EST_HUMAN	CM0-UT0003-050800-503-009 UT0003 Homo sapiens cDNA
5559	15475	25547	4.1	8.0E-37	BE350127.1	EST_HUMAN	ht09g01.x1 NCI_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3146256 3' similar to contains MER29.b3 MER29 repetitive element;
5559	15475	25548	4.1	8.0E-37	BE350127.1	EST_HUMAN	ht09g01.x1 NCI_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3146256 3' similar to contains MER29.b3 MER29 repetitive element;
5584	15499	25576	5.63	8.0E-37	AW840840.1	EST_HUMAN	RC1-CN0008-210100-012-a09_1 CN0008 Homo sapiens cDNA
6602	16482	26670	6.25	8.0E-37	X87344.1	NT	H.sapiens DMA, DMB, HLA-Z1, IPP2, LMP2, TAP1, LMP7, DOB, DQB2 and RING8, 9, 13 and 14 genes
1263	11170		2.51	7.0E-37	AL042800.1	EST_HUMAN	DKFZp434E0422_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434E0422 5'
8140	18028	28274	6.77	7.0E-37	AI817700.1	EST_HUMAN	wk25b11.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2413341 3' similar to contains PTR5.12 PTR5 repetitive element;
8268	18148	28388	4.16	7.0E-37	AI636702.1	EST_HUMAN	tm87g03.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2165140 3' similar to contains L1.b3 L1 repetitive element;
9775	19292		2.48	6.0E-37	AF202723.1	NT	Homo sapiens Sad1 unc-84 domain protein 2 (SUN2) mRNA, partial cds
5707	15615	25716	3.37	5.0E-37	AA307123.1	EST_HUMAN	EST178035 Colon carcinoma (HCC) cell line Homo sapiens cDNA 5' end
5707	15615	25717	3.37	5.0E-37	AA307123.1	EST_HUMAN	EST178035 Colon carcinoma (HCC) cell line Homo sapiens cDNA 5' end
8292	18171		4.17	5.0E-37	7657117	NT	Homo sapiens glycine C-acetyltransferase (2-amino-3-ketobutyrate-CoA ligase) (GCAT), mRNA
9198	18931		3.57	5.0E-37	AF149773.1	NT	Homo sapiens NOD1 protein (NOD1) gene, exons 1, 2, and 3
2374	12254	22145	2.23	4.0E-37	AA702794.1	EST_HUMAN	z90b04.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:448015 3'
5160	15027		1.11	4.0E-37	N62051.1	EST_HUMAN	EST62g10 WATM1 Homo sapiens cDNA clone 52g10 similar to human STS G04101
1970	11863	21755	2.85	3.0E-37	AL048956.1	EST_HUMAN	DKFZp434L2418_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434L2418
1970	11863	21756	2.85	3.0E-37	AL048956.1	EST_HUMAN	DKFZp434L2418_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434L2418
2465	12341		1.7	3.0E-37	AW961150.1	EST_HUMAN	EST373222 MAGF resequences, MAGF Homo sapiens cDNA
2936	12863		3.02	3.0E-37	AW961150.1	EST_HUMAN	EST373222 MAGF resequences, MAGF Homo sapiens cDNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1064	10980	20824	1.94	2.0E-37	AU131202.1	EST_HUMAN	AU131202 NT2RP3 Homo sapiens cDNA clone NT2RP3002166 5'
1064	10980	20825	1.94	2.0E-37	AU131202.1	EST_HUMAN	AU131202 NT2RP3 Homo sapiens cDNA clone NT2RP3002166 5'
1921	11816	21695	1.47	2.0E-37	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
3818	13730	23519	5.05	2.0E-37	4503210	NT	Homo sapiens cytochrome P450, subfamily XXVIA (steroid 27-hydroxylase, cerebrotendinous xanthomatosis), polypeptide 1 (CYP27A1b) mRNA
6007	15912	26039	3.36	2.0E-37	AA346720.1	EST_HUMAN	EST52931 Fetal heart II Homo sapiens cDNA 5' end
6685	16565	26759	3.23	2.0E-37	BF204032.1	EST_HUMAN	601869157F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4111406 5'
8845	18657	28945	16.4	2.0E-37	AF176013.1	NT	Homo sapiens J domain containing protein 1 isoform b (JDP1) mRNA, complete cds
9933	19403		3.15	2.0E-37	11417972	NT	Homo sapiens pascadillo (zebrafish) homolog 1, containing BRCT domain (PES1), mRNA
2041	11932	21828	3.61	1.0E-37	AL163281.2	NT	Homo sapiens chromosome 21 segment HS21C081
3878	13789	23577	22.51	1.0E-37	AF189011.1	NT	Homo sapiens ribonuclease III (RN3) mRNA, complete cds
4072	13974	23753	0.96	1.0E-37	BE872365.1	EST_HUMAN	601448619F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3852652 5'
4857	14737	24517	2.13	1.0E-37	BF371719.1	EST_HUMAN	QV0-FN0180-280700-318-c10 FN0180 Homo sapiens cDNA
7072	16949	27141	2.85	1.0E-37	AA171406.1	EST_HUMAN	zp21b02.r1 Stratagene neuroepithelium (#937231) Homo sapiens cDNA clone IMAGE:610059 5' similar to contains L1.12 L1 repetitive element ;
8082	17973	28222	20.59	1.0E-37	M22878.1	NT	Human somatic cytochrome c (HC1) processed pseudogene, complete cds
9508	19122		2.46	1.0E-37	BE771814.1	EST_HUMAN	CM3-F10096-140700-243-d07 FT0096 Homo sapiens cDNA
5530	15447	25514	3.05	9.0E-38	10048482	NT	Rattus norvegicus multidomain presynaptic cytomatrix protein Piccolo (LOC56768), mRNA
1203	11113	20959	1.95	8.0E-38	11436955	NT	Homo sapiens Grb2-associated binder 2 (KIAA0571), mRNA
2449	12326	22225	1.44	8.0E-38	BF346221.1	EST_HUMAN	602018401F1 NCL_CGAP_Brn67 Homo sapiens cDNA clone IMAGE:4153992 5'
9568	11113	20959	1.36	8.0E-38	11436955	NT	Homo sapiens Grb2-associated binder 2 (KIAA0571), mRNA
2135	12023	21920	1.38	7.0E-38	AW972825.1	EST_HUMAN	EST384920 MAGE resequences, MAGL Homo sapiens cDNA
3005	12933	22726	1.76	6.0E-38	BF033033.1	EST_HUMAN	601455722F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3859348 5'
5432	15352	25407	1.69	6.0E-38	11425114	NT	Homo sapiens zinc finger protein ZNF287 (ZNF287), mRNA
5432	15352	25408	1.69	6.0E-38	11425114	NT	Homo sapiens zinc finger protein ZNF287 (ZNF287), mRNA
9060	18842		4.46	6.0E-38	11435947	NT	Homo sapiens chromosome 12 open reading frame 3 (C12ORF3), mRNA
9542	19143	25266	6.66	6.0E-38	AB002059.1	NT	Homo sapiens DNA for Human P2XM, complete cds
710	10642	20468	1.15	5.0E-38	AW971819.1	EST_HUMAN	EST383908 MAGE resequences, MAGL Homo sapiens cDNA
2404	12281	22178	1.79	5.0E-38	AJ237740.1	NT	Homo sapiens RIBLIR gene (partial), exon 8
6191	16076	26225	2.42	5.0E-38	BE871610.1	EST_HUMAN	601450148F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3854074 5'
113	10092	19909	2.56	4.0E-38	Z25466.1	NT	B.taurus mitochondrial aspartate aminotransferase mRNA, complete CDS
113	10092	19910	2.56	4.0E-38	Z25466.1	NT	B.taurus mitochondrial aspartate aminotransferase mRNA, complete CDS
1141	11055	20897	0.82	3.0E-38	11435947	NT	Homo sapiens chromosome 12 open reading frame 3 (C12ORF3), mRNA
2053	11943		4.39	3.0E-38	AF003530.1	NT	Homo sapiens homeobox protein CDX4 (CDX4) gene, complete cds and flanking repeat regions

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3638	13552		1.11	3.0E-38	7549807	NT	Homo sapiens HIRA interacting protein 4 (dnaj-like) (HIRIP4), mRNA
3781	13693	23480	1.65	3.0E-38	P53538	SWISSPROT	SSU72 PROTEIN
3781	13693	23481	1.65	3.0E-38	P53538	SWISSPROT	SSU72 PROTEIN
4513	14406		0.95	3.0E-38	BE279301.1	EST_HUMAN	601157633F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3504272 5'
6050	19459	26083	7.17	3.0E-38	AL163300.2	NT	Homo sapiens chromosome 21 segment HS21C100
6478	16337	26504	7.64	3.0E-38	BF373664.1	EST_HUMAN	CM3-F10181-140700-241-f07 FT0181 Homo sapiens cDNA
7025	16902	27094	1.78	3.0E-38	H85494.1	EST_HUMAN	yw88b04.r1 Soares melanocyte 2NbHM Homo sapiens cDNA clone IMAGE:249775 5'
7025	16902	27095	1.78	3.0E-38	H85494.1	EST_HUMAN	yw88b04.r1 Soares melanocyte 2NbHM Homo sapiens cDNA clone IMAGE:249775 5'
7727	17577		1.58	3.0E-38	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21C048
44	10032	19836	1.41	2.0E-38	AL163248.2	NT	Homo sapiens chromosome 21 segment HS21C048
1358	11264	21120	2.6	2.0E-38	5902097	NT	Homo sapiens SMT3 (suppressor of mif two 3, yeast) homolog 2 (SMT3H2), mRNA
1627	11531	21390	1.66	2.0E-38	AA437353.1	EST_HUMAN	zw30d01.r1 Soares ovary tumor NbHOT Homo sapiens cDNA clone IMAGE:770785 5' similar to SW:MA12_RABIT P45701 MANNOSYL-OLIGOSACCHARIDE ALPHA-1,2-MANNOSIDASE ;
1627	11531	21391	1.66	2.0E-38	AA437353.1	EST_HUMAN	SW:MA12_RABIT P45701 MANNOSYL-OLIGOSACCHARIDE ALPHA-1,2-MANNOSIDASE ;
6941	16819		4.7	2.0E-38	BE165980.1	EST_HUMAN	MR3-HT0487-150200-113-g01 HT0487 Homo sapiens cDNA
7316	17192		1.47	2.0E-38	BE222256.1	EST_HUMAN	hu09g02.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3166130 3' similar to TR:O02710 O02710 GAG POLYPEPTIDE ;
7970	17820	28063	1.66	2.0E-38	D63479.2	NT	Homo sapiens mRNA for KIAA0145 protein, partial cds
8781	18586	28885	5.24	2.0E-38	BE712790.1	EST_HUMAN	QV2-HT0898-080800-263-a05 HT0698 Homo sapiens cDNA
8907	18715	29008	3.69	2.0E-38	AF190501.1	NT	Homo sapiens leucine-rich repeat-containing G protein-coupled receptor 6 (LGR6) mRNA, partial cds
8907	18715	29009	3.69	2.0E-38	AF190501.1	NT	Homo sapiens leucine-rich repeat-containing G protein-coupled receptor 6 (LGR6) mRNA, partial cds
9112	18876		4.05	2.0E-38	AV726988.1	EST_HUMAN	AV726988 HTC Homo sapiens cDNA clone HTCAHX07 5'
9115	18878		2	2.0E-38	AB012723.1	NT	Homo sapiens gene for kinesin-like protein, complete cds
9412	19064	25313	3.86	2.0E-38	H55641.1	EST_HUMAN	CHIR220580 Chromosome 22 exon Homo sapiens cDNA clone C22_788 5'
9472	19099		2.26	2.0E-38	S74906.1	NT	E1 beta-pyruvate dehydrogenase beta [promoter] [human, placenta, Genomic, 1280 nt]
9924	19366		2.56	2.0E-38	11418248	NT	Homo sapiens sulfotransferase-related protein (SULTX3), mRNA
1077	10993		2.29	1.0E-38	AA401570.1	EST_HUMAN	zu62b02.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:742539 5' similar to contains element MER19 repetitive element ;
1954	11849	21736	0.94	1.0E-38	4885288	NT	Homo sapiens guanine nucleotide binding protein-like 1 (GNL1), mRNA
1973	11866	21758	1	1.0E-38	7661959	NT	Homo sapiens KIAA0173 gene product (KIAA0173), mRNA
2445	12322	22221	1.58	1.0E-38	AF270831.1	NT	Homo sapiens cyclin K (CCNK) gene, exon 7



Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4063	13965	23743	1.41	1.0E-38	AB037863.1	NT	Homo sapiens mRNA for KIAA1442 protein, partial cds
4223	14121	23896	0.83	1.0E-38	4505016	NT	Homo sapiens low density lipoprotein receptor-related protein 6 (LRP6) mRNA, and translated products
4229	14127	23902	1.31	1.0E-38	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
4229	14127	23903	1.31	1.0E-38	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
4493	14387	24173	1.21	1.0E-38	8922543	NT	Homo sapiens hypothetical protein FLJ10600 (FLJ10600), mRNA
5673	15582	25682	3.61	1.0E-38	7305360	NT	Mus musculus otogelin (Otog), mRNA
5673	15582	25683	3.61	1.0E-38	7305360	NT	Mus musculus otogelin (Otog), mRNA
6378	16240	26400	2.78	1.0E-38	AB014512.1	NT	Homo sapiens mRNA for KIAA0612 protein, partial cds
7414	17281	27489	6.23	1.0E-38	BE350127.1	EST_HUMAN	h09g01.x1 NCL_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3146256 3' similar to contains MER29.b3
9264	19481		2.33	1.0E-38	AL163284.2	NT	MER29 repetitive element;
48	10036	19842	5.14	8.0E-39	4502312	NT	Homo sapiens chromosome 21 segment HS21C084
1372	11278	21134	1.51	8.0E-39	4758229	NT	Homo sapiens ATPase, H+ transporting, lysosomal (vacuolar proton pump) 16kD (ATP6C) mRNA
1788	11686		1.06	8.0E-39	AB23404.1	EST_HUMAN	Homo sapiens estrogen receptor-binding fragment-associated gene 9 (EBAG9) mRNA
2047	11938	21832	5.54	7.0E-39	AL163227.2	NT	wh53f10.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2384491 3' similar to TR:P87890 P87890
8184	18070	28319	2.12	6.0E-39	BF331829.1	EST_HUMAN	POL PROTEIN ;
9838	19337		2.23	6.0E-39	BE670394.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C027
991	10912	20757	1.3	5.0E-39	AF003528.1	NT	QV1-BT0631-040900-357-f02 BT0631 Homo sapiens cDNA
							7e34c03.x1 NCL_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3284356 3' similar to WP:R151.6
							CE00828 ;
							Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
2957	12884	22682	5.13	5.0E-39	AF1750154.1	EST_HUMAN	at36b04.x1 Barstead colon HPLRB7 Homo sapiens cDNA clone IMAGE:2374063 3' similar to TR:Q15408
9556	19154		1.54	5.0E-39	11420289	NT	Q15408 NEUTRAL PROTEINASE LARGE SUBUNIT ; contains LTR7.1 LTR7 repetitive element ;
538	10479	20291	10.53	4.0E-39	AB015610.1	NT	Homo sapiens hypothetical protein FLJ10803 (FLJ10803), mRNA
3525	13441	23238	0.96	4.0E-39	AL163210.2	NT	Chlorocebus aethiops mRNA for ribosomal protein S4X, complete cds
							Homo sapiens chromosome 21 segment HS21C010
6707	16587	26775	1.49	4.0E-39	AA682949.1	EST_HUMAN	ae92g04.s1 Stratagene schizo brain S11 Homo sapiens cDNA clone IMAGE:1020438 3' similar to contains
9575	19184		3.08	4.0E-39	11418177	NT	ORF.b1 ORF repetitive element ;
9687	19240		2.03	4.0E-39	BE836452.1	EST_HUMAN	Homo sapiens Ran GTPase activating protein 1 (RANGAP1), mRNA
41	10029	19830	11.27	3.0E-39	AA631949.1	EST_HUMAN	QV0-FN0063-280600-278-c06 FN0063 Homo sapiens cDNA
41	10029	19831	11.27	3.0E-39	AA631949.1	EST_HUMAN	fimfc19 Regional genomic DNA specific cDNA library Homo sapiens cDNA clone CR12-1
							fimfc16 Regional genomic DNA specific cDNA library Homo sapiens cDNA clone CR12-1

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Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
41	10029	19832	11.27	3.0E-39	AA631949.1	EST_HUMAN	frnc10 Regional genomic DNA specific cDNA library Homo sapiens cDNA clone CR12-1
9104	18871	28781	5.51	3.0E-39	A084557.1	EST_HUMAN	ox63a10.s1 Soares_NHr-MP_u_S1 Homo sapiens cDNA clone IMAGE:1660986 3' similar to SW:GTR5_RAT
9104	18871	28782	5.51	3.0E-39	A084557.1	EST_HUMAN	P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE ;
9147	18900		4.42	3.0E-39	H37903.1	EST_HUMAN	ox63a10.s1 Soares_NHr-MP_u_S1 Homo sapiens cDNA clone IMAGE:1660986 3' similar to SW:GTR5_RAT
879	10805		4.03	2.0E-39	BE408203.1	EST_HUMAN	P43427 GLUCOSE TRANSPORTER TYPE 5, SMALL INTESTINE ;
884	10820		17.44	2.0E-39	A525119.1	EST_HUMAN	yp51c06.s1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:160954 3'
1015	10933		3.61	2.0E-39	AF000573.1	EST_HUMAN	601301607F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3636289 5'
1513	11418		10.15	2.0E-39	AW372318.1	EST_HUMAN	promina-7.D01.r btumor Homo sapiens cDNA 5'
						NT	Homo sapiens homocitrate 1,2-dioxygenase gene, complete cds
1930	11825	21707	10.03	2.0E-39	AA720574.1	EST_HUMAN	PM0-BT0340-211299-003-d02 BT0340 Homo sapiens cDNA
2587	12458	22349	1.75	2.0E-39	AL163248.2	NT	rw21g02.s1 NCL_CGAP_GC80 Homo sapiens cDNA clone IMAGE:1241138 3' similar to contains THR.13
4303	14201	23985	1.36	2.0E-39	BF370207.1	EST_HUMAN	THR repetitive element ;
5375	15295	25142	3.4	2.0E-39	AA508980.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C048
6360	16223	26384	2.17	2.0E-39	AA080867.1	EST_HUMAN	RC4-FN0037-280700-011-a10 FN0037 Homo sapiens cDNA
8731	18587	28874	2.33	2.0E-39	D66984.1	NT	ng8603.s1 NCL_CGAP_P16 Homo sapiens cDNA clone IMAGE:941693
9922	19394		2.31	2.0E-39	11425464	NT	zn08f02.r1 Strategene hNT neuron (#637233) Homo sapiens cDNA clone IMAGE:546651 5'
1497	11401	21261	1.78	1.0E-39	AJ006345.1	NT	Human mRNA for KIAA0209 gene, partial cds
1497	11401	21262	1.78	1.0E-39	AJ006345.1	NT	Homo sapiens myosin phosphatase, target subunit 2 (MYPT2), mRNA
1514	11419	21275	4.95	1.0E-39	7657020	NT	Homo sapiens KVLQT1 gene
4561	14453	24239	5.49	1.0E-39	AW951995.1	EST_HUMAN	Homo sapiens KVLQT1 gene
4561	14453	24240	5.49	1.0E-39	AW951995.1	EST_HUMAN	Homo sapiens DKFZp434P211 protein (DKFZp434P211), mRNA
4604	14492	24279	8.58	1.0E-39	7657020	NT	EST364065 IMAGE resequences, MAGB Homo sapiens cDNA
						NT	EST364065 IMAGE resequences, MAGB Homo sapiens cDNA
						NT	Homo sapiens DKFZp434P211 protein (DKFZp434P211), mRNA
5459	15379	25439	1.54	1.0E-39	T80876.1	EST_HUMAN	yd25g05.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:109402 5' similar to contains
5475	15395	25460	4.36	1.0E-39	AJ278170.1	NT	Alu repetitive element/contains LTR1 repetitive element ;
5475	15395	25461	4.36	1.0E-39	AJ278170.1	NT	Mus musculus mRNA for neuronal interacting factor X 1 (NIX1) (Nix1 gene)
6083	16028		1.66	1.0E-39	11436736	NT	Mus musculus mRNA for neuronal interacting factor X 1 (NIX1) (Nix1 gene)
6357	16220	26382	1.75	1.0E-39	D78132.1	NT	Homo sapiens tubby like protein 3 (TULP3), mRNA
543	10484	20294	1.67	9.0E-40	5803210	NT	Homo sapiens mRNA for ras-related GTP-binding protein, complete cds
1215	11123	20971	10.19	9.0E-40	4755145	NT	Homo sapiens UDP-glucose pyrophosphatase 2 (UGP2), mRNA
1215	11123	20972	10.19	9.0E-40	4755145	NT	Homo sapiens AE-binding protein 1 (AEBP1) mRNA
						NT	Homo sapiens AE-binding protein 1 (AEBP1) mRNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1433	11338	21205	5.04	9.0E-40	4507512	NT	Homo sapiens tissue inhibitor of metalloproteinase 3 (Sorsby fundus dystrophy, pseudoinflammatory) (TIMP3) mRNA
3892	15068	23586	3.88	9.0E-40	AB033070.1	NT	Homo sapiens mRNA for KIAA1244 protein, partial cds
4250	14149	23923	0.92	9.0E-40	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
4368	14149	23923	1.12	9.0E-40	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
3004	12932	22725	0.95	8.0E-40	AA078165.1	EST_HUMAN	7H15A04 Chromosome 7 Hel.a cDNA Library Homo sapiens cDNA clone 7H15A04
3847	13768		2.41	8.0E-40	BE396541.1	EST_HUMAN	601288958F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3619166 5'
6541	16399	26578	1.56	7.0E-40	U60325.1	NT	Human DNA polymerase gamma mRNA, nuclear gene encoding mitochondrial protein, complete cds
6541	16399	26579	1.56	7.0E-40	U60325.1	NT	Human DNA polymerase gamma mRNA, nuclear gene encoding mitochondrial protein, complete cds
8270	18150	28391	2.83	7.0E-40	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
2696	12560	22449	3.88	6.0E-40	AA361275.1	EST_HUMAN	EST70527 T-cell lymphoma Homo sapiens cDNA 5' end similar to zinc finger protein family
2696	12560	22450	3.88	6.0E-40	AA361275.1	EST_HUMAN	EST70527 T-cell lymphoma Homo sapiens cDNA 5' end similar to zinc finger protein family
5616	15531		2.07	6.0E-40	BE504766.1	EST_HUMAN	hz40g01.x1 NCI_CGAP_G06 Homo sapiens cDNA clone IMAGE:3210480 3'
6141	15989	26124	3.08	6.0E-40	11439783	NT	Homo sapiens fatty acid desaturase 1 (FADS1), mRNA
6141	15989	26125	3.08	6.0E-40	11439783	NT	Homo sapiens fatty acid desaturase 1 (FADS1), mRNA
7731	17581	27804	6.82	6.0E-40	AV653028.1	EST_HUMAN	AV653028 GLC Homo sapiens cDNA clone GLCDGF04 3'
7731	17581	27805	6.82	6.0E-40	AV653028.1	EST_HUMAN	AV653028 GLC Homo sapiens cDNA clone GLCDGF04 3'
2561	12433	22326	1.89	5.0E-40	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
1834	11731	21607	1.38	4.0E-40	AI686005.1	EST_HUMAN	tt91b01.x1 NCI_CGAP_Pr28 Homo sapiens cDNA clone IMAGE:2248873 3' similar to TR:O73505 O73505 POL PROTEIN. ;
2061	11951		2.67	4.0E-40	AF003528.1	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
4291	14189	23973	7.95	4.0E-40	766217	NT	Homo sapiens KIAA0433 protein (KIAA0433), mRNA
6662	16542	26738	3.76	4.0E-40	AA742809.1	EST_HUMAN	nv34e10.r1 NCI_CGAP_Br4 Homo sapiens cDNA clone IMAGE:1222122
7237	17114	27308	4.87	4.0E-40	BE009416.1	EST_HUMAN	FM0-BN0167-070500-002-h12 BN0167 Homo sapiens cDNA
7237	17114	27309	4.87	4.0E-40	BE009416.1	EST_HUMAN	FM0-BN0167-070500-002-h12 BN0167 Homo sapiens cDNA
8099	17989	28238	4.07	4.0E-40	AW841585.1	EST_HUMAN	RC1-CN0017-120200-012-e04 CN0017 Homo sapiens cDNA
4040	13943	23721	0.98	3.0E-40	AI925949.1	EST_HUMAN	wh1207.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2380549 3'
6001	15906	26030	6.25	3.0E-40	11417342	NT	Homo sapiens sema domain, seven thrombospondin repeats (type 1 and type 1-like), transmembrane domain (TM) and short cytoplasmic domain, (semaphorin) 5A (SEMA5A), mRNA

Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6882	16761	26959	4.28	3.0E-40	5454167	NT	Homo sapiens HBV associated factor (XAP4) mRNA
7186	17063	27253	1.49	3.0E-40	AF078779.1	NT	Rattus norvegicus putative four repeat ion channel mRNA, complete cds
7312	17188	27389	1.52	3.0E-40	AF078779.1	NT	Rattus norvegicus putative four repeat ion channel mRNA, complete cds
8387	18264	28515	1.93	3.0E-40	BE350127.1	EST_HUMAN	h09g01.x1 NCL_CGAP_Kid13 Homo sapiens cDNA clone IMAGE:3146256 3' similar to contains MER29.b3
8588	18456	28725	11.23	3.0E-40	6005813	NT	MER29 repetitive element ; Homo sapiens serine threonine protein kinase (NDR), mRNA
8855	18667	28954	1.96	3.0E-40	AW118799.1	EST_HUMAN	xd96h02.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2605491 3' similar to TR:Q15804
322	10283		12.69	2.0E-40	A123036.1	EST_HUMAN	Q15804 SIMILAR TO ENV OF TYPE A AND TYPE B RETROVIRUSES AND TO CLASS II HERVS ; qg52h08.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1838847 3'
777	10707		2.72	2.0E-40	AW303868.1	EST_HUMAN	xr24e10.x1 NCL_CGAP_U14 Homo sapiens cDNA clone IMAGE:2761098 3' similar to SW_RS5_MOUSE
1783	11681		1.4	2.0E-40	AV731601.1	EST_HUMAN	P97461 40S RIBOSOMAL PROTEIN S5 ; AV731601 HTF Homo sapiens cDNA clone HTFAZE05 5'
1892	11787	21664	2.19	2.0E-40	4506188	NT	Homo sapiens proteasome (prosome, macropain) subunit, alpha type, 7 (PSMA7) mRNA, and translated products
1892	11787	21665	2.19	2.0E-40	4506188	NT	Homo sapiens proteasome (prosome, macropain) subunit, alpha type, 7 (PSMA7) mRNA, and translated products
2026	11917	21807	1.08	2.0E-40	A1688562.1	EST_HUMAN	wt90a11.x1 NCL_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2514716 3' similar to TR:Q91929 Q91929
2123	12011	21910	2.61	2.0E-40	5453592	NT	ZINC FINGER PROTEIN ;
2333	12214	22112	2.35	2.0E-40	A1277892.1	NT	Homo sapiens adenyl cyclase-associated protein 2 (CAP2) mRNA
2658	12525		1.08	2.0E-40	BE275932.1	EST_HUMAN	Homo sapiens partial TTN gene for titin
3087	13014	22806	3.59	2.0E-40	5453592	NT	601121567F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3345784 5'
4807	14691	24478	1.49	2.0E-40	AL163280.2	NT	Homo sapiens adenyl cyclase-associated protein 2 (CAP2) mRNA
4807	14691	24479	1.49	2.0E-40	AL163280.2	NT	Homo sapiens chromosome 21 segment HS21C080
865	10791		1.65	1.0E-40	AA225989.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C080
2580	12451	22343	1.91	1.0E-40	BF036881.1	EST_HUMAN	ncb9a09.s1 NCL_CGAP_P1 Homo sapiens cDNA clone IMAGE:1007608
2653	12520		1.92	1.0E-40	BE018348.1	EST_HUMAN	601460375F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3863803 5'
2707	12570	22460	0.92	1.0E-40	BF541030.1	EST_HUMAN	bb79a10.y1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3048570 5' similar to TR:Q9Z158 Q9Z158
2707	12570	22461	0.92	1.0E-40	BF541030.1	EST_HUMAN	SYNTAXIN 17 ;
3288	13181		1.81	1.0E-40	4507142	NT	602068604F1 NIH_MGC_58 Homo sapiens cDNA clone IMAGE:4067736 5'
4505	14388	24184	6.28	1.0E-40	4508012	NT	602068604F1 NIH_MGC_58 Homo sapiens cDNA clone IMAGE:4067736 5'
4892	14772	24550	0.88	1.0E-40	7705778	NT	Homo sapiens sorting nexin 3 (SNX3) mRNA Homo sapiens zinc finger protein 200 (ZNF200) mRNA, and translated products Homo sapiens CGI-65 protein (LOC51103), mRNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6215	16081	26230	2.03	1.0E-40	AA573201.1	EST_HUMAN	nj42f04.s1 NCI_CGAP_AA1 Homo sapiens cDNA clone IMAGE:995167 3'
6215	16081	26231	2.03	1.0E-40	AA573201.1	EST_HUMAN	nj42f04.s1 NCI_CGAP_AA1 Homo sapiens cDNA clone IMAGE:995167 3'
8289	18168	28412	5.72	1.0E-40	AU149345.1	EST_HUMAN	AU149345 NT2RM4 Homo sapiens cDNA clone NT2RM4002122 3'
8355	18232	28480	53.3	1.0E-40	AI239572.1	EST_HUMAN	qt31h10.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1846339 3'
9521	19622		3.93	1.0E-40	BF334112.1	EST_HUMAN	MR2-CT0222-211099-002-e10 CT0222 Homo sapiens cDNA
6621	16501	26689	1.73	8.0E-41	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
811	12678	20585	2.36	7.0E-41	AI934364.1	EST_HUMAN	wp04h04.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2463895 3'
811	12678	20586	2.36	7.0E-41	AI934364.1	EST_HUMAN	wp04h04.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2463895 3'
5655	15567	25663	3.27	7.0E-41	11419208	NT	Homo sapiens a disintegrin and metalloproteinase domain 22 (ADAM22), mRNA
9931	19818		4.92	7.0E-41	11417972	NT	Homo sapiens pscadillo (zbratfish) homolog 1, containing BRCT domain (PES1), mRNA
279	10244	20064	1.72	6.0E-41	AB037163.1	NT	Homo sapiens DSCR5b mRNA, complete cds
2084	11954	21851	2.19	6.0E-41	7657042	NT	Homo sapiens Down syndrome candidate region 1 (DSCR1), mRNA
4364	14260	24044	0.94	6.0E-41	BE557816.1	EST_HUMAN	601340485F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3682677 5'
1761	11660	21532	1.31	5.0E-41	162628.1	EST_HUMAN	yc03e10.s1 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:79626 3'
4018	13922		0.98	5.0E-41	4886636	NT	Homo sapiens target of myo1 (chicken) homolog (TOM1), mRNA
5945	15850		2.55	5.0E-41	BE067042.1	EST_HUMAN	PM4-BT0341-251199-002-F11 BT0341 Homo sapiens cDNA
385	10332		1.91	4.0E-41	BE156318.1	EST_HUMAN	QV0-HIT0367-150200-114-g09 HT0367 Homo sapiens cDNA
1082	10998	20839	1.28	4.0E-41	AU119344.1	EST_HUMAN	AU119344 HEMBA1 Homo sapiens cDNA clone HEMBA1005583 5'
1388	11293	21149	9.42	4.0E-41	AI027117.1	EST_HUMAN	ow45e06.s1 Soares_parathyroid_tumor_NbHPA Homo sapiens cDNA clone IMAGE:1649794 3' similar to TR:000597 000597 CYTOCHROME C-LIKE POLYPEPTIDE; ;contains LTR5.b1 LTR5 repetitive element; ;
1388	11293	21150	9.42	4.0E-41	AI027117.1	EST_HUMAN	ow45e06.s1 Soares_parathyroid_tumor_NbHPA Homo sapiens cDNA clone IMAGE:1649794 3' similar to TR:000597 000597 CYTOCHROME C-LIKE POLYPEPTIDE; ;contains LTR5.b1 LTR5 repetitive element; ;
1404	11309	21170	2.12	4.0E-41	AB008681.1	NT	Homo sapiens gene for activin receptor type IIB, complete cds
1618	11522	21380	8.5	4.0E-41	AI500406.1	EST_HUMAN	tm96c04.x1 NCI_CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2165958 3' similar to contains OFR.b1 OFR repetitive element; ;
2859	12787	22578	3.03	4.0E-41	AJ229041.1	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22; segment 1/3
2859	12787	22579	3.03	4.0E-41	AJ229041.1	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22; segment 1/3
4052	13954	23730	1.89	4.0E-41	X92885.1	NT	H.sapiens DNase I hypersensitive site (HSS-3) enhancer element
5920	15825		1.39	4.0E-41	AV758295.1	EST_HUMAN	AV758295 BM Homo sapiens cDNA clone BMFBHC06 5'
7590	17441	27657	6.01	4.0E-41	BF304683.1	EST_HUMAN	601888096F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4122119 5'
8925	18733		7.62	4.0E-41	AV710480.1	EST_HUMAN	AV710480 Cu Homo sapiens cDNA clone CuAAC007 5'
9699	19510		2.31	4.0E-41	AV708431.1	EST_HUMAN	AV708431 ADC Homo sapiens cDNA clone ADCARE02 5'

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
932	10857	20704	1.64	3.0E-41	AB030176.1	NT	Homo sapiens PAD-H19 mRNA for peptidylarginine deiminase type II, complete cds
4240	14139	23914	3.08	3.0E-41	AB028898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
5047	14919		0.85	3.0E-41	AB037748.1	NT	Homo sapiens mRNA for KIAA1327 protein, partial cds
5376	15296	25143	7.36	3.0E-41	X87689.1	NT	H. sapiens mRNA for putative p64 CLCP protein
5849	15755	25873	1.49	3.0E-41	AB037808.1	NT	Homo sapiens mRNA for KIAA1387 protein, partial cds
1782	11445	21305	7.3	2.0E-41	U43701.1	NT	Human ribosomal protein L23a mRNA, complete cds
1915	11810	21688	2.3	2.0E-41	AA331940.1	EST_HUMAN	EST T35818 Embryo, 8 week I Homo sapiens cDNA 5' end
2172	12059	21962	1.03	2.0E-41	D86962.1	NT	Human mRNA for KIAA0207 gene, complete cds
2221	12106	22010	4.07	2.0E-41	X99631.1	NT	G. gorilla DNA for ZNF80 gene homolog
2798	11445	21305	5.31	2.0E-41	U43701.1	NT	Human ribosomal protein L23a mRNA, complete cds
4521	14414	24199	1.06	2.0E-41	AL163267.2	NT	Homo sapiens chromosome 21 segment HS21C067
4521	14414	24200	1.06	2.0E-41	AL163267.2	NT	Homo sapiens chromosome 21 segment HS21C067
6522	16381	26559	6.59	2.0E-41	AF038404.1	NT	Homo sapiens homolog of Nedd5 (hNedd5) mRNA, complete cds
6702	16582	26772	1.33	2.0E-41	M96944.1	NT	Human B-cell specific transcription factor (BSAP) mRNA, complete cds
6702	16582	26773	1.33	2.0E-41	M96944.1	NT	Human B-cell specific transcription factor (BSAP) mRNA, complete cds
6716	16586	26786	1.39	2.0E-41	AA328265.1	EST_HUMAN	EST T31723 Embryo, 12 week I Homo sapiens cDNA 5' end
7188	17065	27255	1.7	2.0E-41	P52742	SWISSPROT	ZINC FINGER PROTEIN 135
8777	18594	28882	3.46	2.0E-41	AA372637.1	EST_HUMAN	EST T84555 Colon adenocarcinoma IV Homo sapiens cDNA 5' end
4465	14359	24149	4.84	1.0E-41	6678468	NT	Mus musculus tubulin alpha 6 (Tuba6), mRNA
7420	17287	27494	1.8	1.0E-41	A1217868.1	EST_HUMAN	qf75c10.x1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:1755858 3'
9197	18930		2.63	1.0E-41	11526291	NT	Homo sapiens hypothetical protein FLJ20454 (FLJ20454), mRNA
6958	16836		1.33	9.0E-42	BE179191.1	EST_HUMAN	RCO-HT0613-210300-032-g01 HT0613 Homo sapiens cDNA
7292	17168	27367	2.63	9.0E-42	11560151	NT	Homo sapiens hypothetical C2H2 zinc finger protein FLJ22504 (FLJ22504), mRNA
7292	17168	27368	2.63	9.0E-42	11560151	NT	Homo sapiens hypothetical C2H2 zinc finger protein FLJ22504 (FLJ22504), mRNA
455	10399	20216	5.37	8.0E-42	AF003530.1	NT	Homo sapiens homeobox protein CDX4 (CDX4) gene, complete cds and flanking repeat regions
2062	11952	21849	1.32	8.0E-42	AB028898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
9238	19625		32.6	8.0E-42	AA493896.1	EST_HUMAN	rh07c02.s1 NCI_CGAP_Thy1 Homo sapiens cDNA clone IMAGE:943586 similar to TR:G434304 G434304 367BP EXPRESSED SEQUENCE TAG MRNA ;
916	10840		1.83	7.0E-42	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
1812	11709	21586	3.25	6.0E-42	AF012872.1	NT	Homo sapiens phosphatidylinositol 4-kinase 230 (pi4K230) mRNA, complete cds
1812	11709	21587	3.25	6.0E-42	AF012872.1	NT	Homo sapiens phosphatidylinositol 4-kinase 230 (pi4K230) mRNA, complete cds

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Table 4

## Single Exon Probes Expressed In Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2244	12128		3.51	6.0E-42	AW238656.1	EST_HUMAN	xp29f08.x1 NCI_CGAP_HN10 Homo sapiens cDNA clone IMAGE:2741799 3' similar to contains L1.t1 L1 repetitive element ;
4936	14814		1.04	6.0E-42	AI284770.1	EST_HUMAN	qu24h09.x1 NCI_CGAP_BR12 Homo sapiens cDNA clone IMAGE:1965761 similar to contains Alu repetitive element
5355	15275	25105	1.81	6.0E-42	AB028990.1	NT	Homo sapiens mRNA for KIAA1067 protein, partial cds
5504	15275	25105	1.72	6.0E-42	AB028990.1	NT	Homo sapiens mRNA for KIAA1067 protein, partial cds
131	10105		5.44	5.0E-42	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
431	10376	20197	1.17	5.0E-42	BE217913.1	EST_HUMAN	h31e11.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3175052 3'
478	10422		2.94	5.0E-42	5730038	NT	Homo sapiens SET domain and mariner transposase fusion gene (SETMAR) mRNA
479	10423		1.27	5.0E-42	5730038	NT	Homo sapiens SET domain and mariner transposase fusion gene (SETMAR) mRNA
6016	15920	26050	1.76	5.0E-42	11433063	NT	Homo sapiens ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome) (UBE3A), mRNA
6016	15920	26051	1.76	5.0E-42	11433063	NT	Homo sapiens ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome) (UBE3A), mRNA
6072	16055	26203	2.75	5.0E-42	11417957	NT	Homo sapiens myotubularin related protein 3 (MTMR3), mRNA
6274	16138	26294	1.57	5.0E-42	AF071569.1	NT	Homo sapiens multifunctional calcium/calmodulin-dependent protein kinase II delta2 isoform mRNA, complete cds
7098	16975	27168	2.76	5.0E-42	AB037715.1	NT	Homo sapiens mRNA for KIAA1294 protein, partial cds
8366	18243	28494	2.15	5.0E-42	8923162	NT	Homo sapiens hypothetical protein FLJ20163 (FLJ20163), mRNA
736	10668	20502	8.89	4.0E-42	AF055066.1	NT	Homo sapiens MHC class 1 region
736	10668	20503	8.89	4.0E-42	AF055066.1	NT	Homo sapiens MHC class 1 region
1050	10967	20809	2.67	4.0E-42	AF189011.1	NT	Homo sapiens ribonuclease III (RN3) mRNA, complete cds
4100	14000	23779	1.61	4.0E-42	X59417.1	NT	H. sapiens PROS-27 mRNA
4156	14056	23830	4.52	4.0E-42	4506496	NT	Homo sapiens regulatory factor X, 4 (influences HLA class II expression) (RFX4) mRNA
4480	14374	24162	10.26	4.0E-42	4508008	NT	Homo sapiens zinc finger protein 177 (ZNF177) mRNA
8041	17932	28179	2.07	4.0E-42	AW818630.1	EST_HUMAN	RC1-ST0278-040400-018-h11 ST0278 Homo sapiens cDNA
8041	17932	28180	2.07	4.0E-42	AW818630.1	EST_HUMAN	RC1-ST0278-040400-018-h11 ST0278 Homo sapiens cDNA
8714	15531	28815	3.22	4.0E-42	BF036327.1	EST_HUMAN	601458631F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3862086 5'
98	10084		0.78	3.0E-42	AA486105.1	EST_HUMAN	ab14e10.s1 Stratagene lung (#937210) Homo sapiens cDNA clone IMAGE:840810 3' similar to contains THR.2 THR repetitive element ;
1467	11372	21239	3.63	2.0E-42	BF376834.1	EST_HUMAN	RC0-TN0079-110900-024-g07 TN0079 Homo sapiens cDNA
2361	12241		3.86	2.0E-42	AW896344.1	EST_HUMAN	RC3-NN0070-270400-011-h10 NN0070 Homo sapiens cDNA
2375	12255	22146	2.15	2.0E-42	AW250059.1	EST_HUMAN	2819283.3prime NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2819283 3'
5519	15437	25500	10.2	2.0E-42	AW965368.1	EST_HUMAN	EST367438 IMAGE resequences, MAGC Homo sapiens cDNA

Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5519	15437	25501	10.2	2.0E-42	AW955368.1	EST_HUMAN	EST T367438 MAGE resequences, MAGC Homo sapiens cDNA
7663	17513	27739	1.27	2.0E-42	BE533919.1	EST_HUMAN	601051284F1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3447620 5'
717	10648	20478	1.06	1.0E-42	XS7147.1	NT	Human endogenous retrovirus pHE.1 (ERV9)
1026	10944	20789	0.96	1.0E-42	AW295809.1	EST_HUMAN	U1-H-B11-afh-e-04-0-UI.s1 NCI_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2721871 3'
1085	11001	20842	1.11	1.0E-42	AJ251818.1	NT	Homo sapiens partial C9 gene for complement component C9, exon 1
1085	11001	20843	1.11	1.0E-42	AJ251818.1	NT	Homo sapiens partial C9 gene for complement component C9, exon 1
1222	12698	20983	12.78	1.0E-42	AF067166.1	NT	Homo sapiens NADH-ubiquinone oxidoreductase AGGG subunit precursor homolog mRNA, nuclear gene encoding mitochondrial protein, complete cds
1222	12698	20984	12.78	1.0E-42	AF067166.1	NT	Homo sapiens NADH-ubiquinone oxidoreductase AGGG subunit precursor homolog mRNA, nuclear gene encoding mitochondrial protein, complete cds
1673	11575	21443	1.46	1.0E-42	11423219	NT	Homo sapiens rec (LOC51201), mRNA
1986	11879	21772	0.91	1.0E-42	AF110296.1	NT	Homo sapiens PDNP1 gene, exon 17
2497	12372	22264	1.98	1.0E-42	5174458	NT	Homo sapiens major histocompatibility complex, class II, DM alpha (HLA-DMA) mRNA
2935	12862	22662	8.93	1.0E-42	4505524	NT	Homo sapiens origin recognition complex, subunit 5 (yeast homolog)-like (ORC5L) mRNA, and translated products
3647	13561	23347	2.16	1.0E-42	7662027	NT	Homo sapiens KIAA0255 gene product (KIAA0255), mRNA
3849	13760	23553	1.02	1.0E-42	AL163267.2	NT	Homo sapiens chromosome 21 segment HS21C067
4153	14053	23827	1.72	1.0E-42	AL163280.2	NT	Homo sapiens chromosome 21 segment HS21C080
4489	14383	24170	0.86	1.0E-42	AW813617.1	EST_HUMAN	RC3-ST0197-161099-012-a03 ST0197 Homo sapiens cDNA
4640	14528	24316	2.85	1.0E-42	5803122	NT	Homo sapiens proteasome inhibitor (PI31), mRNA
4640	14528	24317	2.85	1.0E-42	5803122	NT	Homo sapiens proteasome inhibitor (PI31), mRNA
4669	14555	24348	5.35	1.0E-42	4506758	NT	Homo sapiens ryanodine receptor 3 (RYR3) mRNA
4769	14654	24442	1.2	1.0E-42	AB033114.1	NT	Homo sapiens mRNA for KIAA1288 protein, partial cds
5048	14920	24693	0.98	1.0E-42	4501912	NT	Homo sapiens a disintegrin and metalloproteinase domain 23 (ADAM23) mRNA
5048	14920	24694	0.98	1.0E-42	4501912	NT	Homo sapiens a disintegrin and metalloproteinase domain 23 (ADAM23) mRNA
7805	17655	27893	3.89	9.0E-43	4757969	NT	Homo sapiens chromodomain protein, Y chromosome-like (CDYL) mRNA
8397	18273	28525	2.84	9.0E-43	AA435719.1	EST_HUMAN	z79a07.s1 Scores_testis_NHT Homo sapiens cDNA clone IMAGE:728532 3'
636	10573	20386	12.13	8.0E-43	AV736824.1	EST_HUMAN	AV736824 CB Homo sapiens cDNA clone CBLAKH08 5'
636	10573	20387	12.13	8.0E-43	AV736824.1	EST_HUMAN	AV736824 CB Homo sapiens cDNA clone CBLAKH08 5'
685	10618	20441	4.33	8.0E-43	8923276	NT	Homo sapiens hypothetical protein FLJ20297 (FLJ20297), mRNA
685	10618	20442	4.33	8.0E-43	8923276	NT	Homo sapiens hypothetical protein FLJ20297 (FLJ20297), mRNA
685	10618	20443	4.33	8.0E-43	8923276	NT	Homo sapiens hypothetical protein FLJ20297 (FLJ20297), mRNA
3589	13503	23292	6.05	7.0E-43	AW246442.1	EST_HUMAN	2822251.5prime NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2822251 5'



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Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7092	16999		1.76	7.0E-43	AI936748.1	EST_HUMAN	wp69b01.x1 NCI_CGAP_Bn25 Homo sapiens cDNA clone IMAGE:246985 3' similar to TR:O15475 O15475 UNNAMED HERV-H PROTEIN ; contains LTR7.b1 LTR7 repetitive element ;
1320	11227		10.17	6.0E-43	AA491890.1	EST_HUMAN	ne72d06.s1 NCI_CGAP_Ew1 Homo sapiens cDNA clone IMAGE:909803 similar to gb:L05095 60S RIBOSOMAL PROTEIN L30 (HUMAN);
2547	12421		4.15	6.0E-43	AV708201.1	EST_HUMAN	AV708201 ADC Homo sapiens cDNA clone ADCACC10 5'
5811	15716	25829	2.02	6.0E-43	9955973	NT	Homo sapiens ATP-binding cassette, sub-family C (CFTR/MRP), member 3 (ABCC3), transcript variant MRP3B, mRNA
6128	15975	26111	2.02	6.0E-43	AW468997.1	EST_HUMAN	hd30b04.x1 Soares NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2910991 3' similar to contains MER1.i3 MER1 MER1 repetitive element ;
7668	17518	27745	1.83	6.0E-43	AA195154.1	EST_HUMAN	z35e06.r1 Soares NHMPu_S1 Homo sapiens cDNA clone IMAGE:665410 5' similar to TR:G529641 G629641 DB1, COMPLETE CDS ; contains element PTR7 repetitive element ;
8449	18322		6.54	6.0E-43	AL119158.1	EST_HUMAN	DKFZp761L1712_r1 761 (synonym: hamy2) Homo sapiens cDNA clone DKFZp761L1712 5'
137	10111		1.98	5.0E-43	AL163213.2	NT	Homo sapiens chromosome 21 segment HS21C013
494	10437	20249	3.01	5.0E-43	AA392780.1	EST_HUMAN	EST90033 Testis Homo sapiens cDNA 5' end
2816	12745	22539	1.36	5.0E-43	AV732578.1	EST_HUMAN	AV732578 HTF Homo sapiens cDNA clone HTFANC06 5'
7390	17308	27514	4.47	5.0E-43	AA463288.1	EST_HUMAN	aa33d08.r1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:815055 5'
7945	17795	28035	2.2	5.0E-43	AI733244.1	EST_HUMAN	oo52c10.x5 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1569810 3' similar to TR:P90591 P90591 PV14 GENE ;
7994	17814	28055	1.41	5.0E-43	AL049110.1	EST_HUMAN	DKFZp434D0119_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434D0119
8145	18033	28280	5.46	5.0E-43	AW863007.1	EST_HUMAN	MR2-SN0007-290400-004-c02 SN0007 Homo sapiens cDNA
8338	18215	28468	2.67	5.0E-43	W29011.1	EST_HUMAN	55a4 Human retina cDNA randomly primed sublibrary Homo sapiens cDNA
8753	17902	28146	2.6	5.0E-43	X15804.1	NT	Human mRNA for alpha-actinin
957	12643	20728	4.85	4.0E-43	AF003528.1	NT	Homo sapiens X-linked arylidic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
6231	16097		1.72	4.0E-43	11416793	NT	Homo sapiens protocadherin beta 6 (PCDH6), mRNA
6757	16636	26824	4.49	4.0E-43	AI244341.1	EST_HUMAN	qj76a02.x1 NCI_CGAP_Kid3 Homo sapiens cDNA clone IMAGE:1865354 3' similar to contains MER10.i3 MER10 repetitive element ;
6757	16636	26825	4.49	4.0E-43	AI244341.1	EST_HUMAN	qj76a02.x1 NCI_CGAP_Kid3 Homo sapiens cDNA clone IMAGE:1865354 3' similar to contains MER10.i3 MER10 repetitive element ;
8624	18489	28761	1.8	4.0E-43	T77380.1	EST_HUMAN	yd72h10.r1 Soares fetal liver spleen 1N1FLS Homo sapiens cDNA clone IMAGE:113827 5'
9174	18915		1.89	4.0E-43	R20950.1	EST_HUMAN	yg06b05.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:31363 5' similar to contains MER10 repetitive element ;
1195	11105		2.84	3.0E-43	AF223391.1	NT	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1689	11571	21437	1.48	3.0E-43	X97869.1	NT	H.sapiens gene encoding La autoantigen
3524	13440	23237	1.05	3.0E-43	S89002.1	NT	AML1-EVI-1=AML1-EVI-1 fusion protein (rearranged translocation) [human, leukemic cell line SKH1, mRNA Mutant, 5938 nt]
4193	14093	23872	0.95	3.0E-43	AA548154.1	EST_HUMAN	nk55d06.s1 NCI_CGAP_P77 Homo sapiens cDNA clone IMAGE:1017419
5837	15743	28855	1.71	3.0E-43	7305360	NT	Mus musculus otogelin (Otog), mRNA
5837	15743	28855	1.71	3.0E-43	7305360	NT	Mus musculus otogelin (Otog), mRNA
6037	15940	26072	3.78	3.0E-43	U65487.1	NT	Human ribosomal RNA upstream binding transcription factor (UBTF) gene, partial cds
6746	16625		6.88	3.0E-43	AA458824.1	EST_HUMAN	aa85f11.s1 Stratagene fetal retina 937202 Homo sapiens cDNA clone IMAGE:838413 3' similar to contains THR12 THR repetitive element ;
7120	16997	27188	1.18	3.0E-43	7661721	NT	Homo sapiens hypothetical protein (HSA011916), mRNA
8982	18788	29061	2.02	3.0E-43	5730038	NT	Homo sapiens SET domain and mariner transposase fusion gene (SETMAR) mRNA
177	10148		4.27	2.0E-43	AI190764.1	EST_HUMAN	qd61c09.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1733968 3' similar to contains PTR7.13 PTR7 PTR7 repetitive element ;
6312	16175	26332	1.36	2.0E-43	AW207390.1	EST_HUMAN	UI-H-B11-af-a-09-0-UI.s1 NCI_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2721712 3'
6836	16715		7.53	2.0E-43	U43701.1	NT	Human ribosomal protein L23a mRNA, complete cds
8532	18404		3.38	2.0E-43	T03007.1	EST_HUMAN	FB1G5 Fetal brain, Stratagene Homo sapiens cDNA clone FB1G5 3' end similar to LINE-1
1630	11534	21394	2.92	1.0E-43	AF154836.1	NT	Homo sapiens Ras-like GTP-binding protein (RAB27A) gene, exons 1b and 2
1630	11534	21395	2.92	1.0E-43	AF154836.1	NT	Homo sapiens Ras-like GTP-binding protein (RAB27A) gene, exons 1b and 2
1678	11580	21450	3.36	1.0E-43	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
2692	12557	22444	4.95	1.0E-43	BF348283.1	EST_HUMAN	602022313F1 NCI_CGAP_Bn67 Homo sapiens cDNA clone IMAGE:4157666 5'
5987	15892	26014	12.07	1.0E-43	4507168	NT	Homo sapiens Sp4 transcription factor (SP4) mRNA
5987	15892	26015	12.07	1.0E-43	4507168	NT	Homo sapiens Sp4 transcription factor (SP4) mRNA
6159	15117	24860	1.63	1.0E-43	R19751.1	EST_HUMAN	yg40e01.r1 Soares infant brain 1NIB Homo sapiens cDNA clone IMAGE:34792 5' similar to SP-BD38_MOUSE P28656 BRAIN PROTEIN DN38 ;
6700	16580		1.63	1.0E-43	AF198490.1	NT	Homo sapiens 8q22.1 region and MTG8 (CBFA2T1) gene, partial cds
7129	17006	27199	25.23	1.0E-43	AW063676.1	EST_HUMAN	EST1375749 IMAGE: ressequences, MAGH Homo sapiens cDNA
8331	18208	28458	6.75	1.0E-43	AI994991.1	EST_HUMAN	wr87h01.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2494705 3'
8872	18580	28844	3.2	1.0E-43	11424378	NT	Homo sapiens calcium channel, voltage-dependent, alpha 1E subunit (CACNA1E), mRNA
9117	18880		3.66	1.0E-43	AL137864.1	EST_HUMAN	DKFZp761D1015_r1 761 (synonym: hamy2) Homo sapiens cDNA clone DKFZp761D1015 5'
9405	19058	25311	1.89	1.0E-43	AI675416.1	EST_HUMAN	wb99b04.x1 NCI_CGAP_P28 Homo sapiens cDNA clone IMAGE:2313775 3'
9618	19196	25255	2.52	9.0E-44	11418322	NT	Homo sapiens cadherin EGF LAG seven-pass G-type receptor 1 (CELSR1), mRNA
872	10798	20648	5.98	8.0E-44	AI222985.1	EST_HUMAN	qh23g01.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1845552 3'
872	10798	20649	5.98	8.0E-44	AI222985.1	EST_HUMAN	qh23g01.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1845552 3'
6968	16845	27037	3.87	8.0E-44	X94354.1	NT	H.sapiens DNA for Cone cGMP-PDE gene

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8504	18377	28643	3.39	8.0E-44	Y10498.2	NT	Homo sapiens mRNA for thymidine kinase, partial
8935	18743	29038	5.06	8.0E-44	L29139.1	NT	Homo sapiens myosin mRNA, partial cds
9359	19031	25304	2.59	8.0E-44	11527389	NT	Homo sapiens polymerase (RNA) II (DNA directed) polypeptide F (POLR2F), mRNA
9400	19369	25191	1.89	8.0E-44	11418086	NT	Homo sapiens putative nuclear protein (HRIHFB2122), mRNA
9742	19532	25059	1.75	8.0E-44	11418099	NT	Homo sapiens protein kinase C, alpha binding protein (PRKCABP), mRNA
9885	19369	25191	1.84	8.0E-44	11418086	NT	Homo sapiens putative nuclear protein (HRIHFB2122), mRNA
643	10580		0.85	7.0E-44	R06035.1	EST_HUMAN	ye89e01.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:124920 5'
2187	12074	21978	1.2	7.0E-44	5031886	NT	Homo sapiens LIM domain-containing preferred translocation partner in lipoma (LPP), mRNA
2937	12864	22663	2.2	7.0E-44	AF048729.1	NT	Homo sapiens minisatellite ms32 repeat region
2937	12864	22664	2.2	7.0E-44	AF048729.1	NT	Homo sapiens minisatellite ms32 repeat region
3786	13698	23485	2.28	7.0E-44	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
4148	14048	23821	1.17	7.0E-44	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
4148	14048	23822	1.17	7.0E-44	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
6762	16641	28828	2.05	7.0E-44	AU159839.1	EST_HUMAN	Homo sapiens chromosome 21 unknown mRNA
8986	18791	29080	2.51	6.0E-44	AW954050.1	EST_HUMAN	AU159839 Y79AA1 Homo sapiens cDNA clone Y79AA1000496 3'
300	10284		2.52	5.0E-44	AJ289880.1	NT	EST366120 MAGE resequencing, MAGC Homo sapiens cDNA
329	10288		2.04	5.0E-44	AJ289880.1	NT	Homo sapiens KIAA0851 gene (partial), XT3 gene and LZTFL1 gene
6605	16485	26672	3.79	5.0E-44	AI588523.1	EST_HUMAN	Homo sapiens KIAA0851 gene (partial), XT3 gene and LZTFL1 gene
7399	17317		2.59	5.0E-44	AU124571.1	EST_HUMAN	tn40d02.x1 NCJ_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2170083 3' similar to contains ORF.t1
3388	13287	23086	2.9	4.0E-44	AL163303.2	NT	ORF OFR repetitive element ;
8584	18433	28702	13.3	4.0E-44	U90878.1	NT	AU124571 NT2RM4 Homo sapiens cDNA clone NT2RM4000218 5'
1746	11646		1.07	3.0E-44	6912477	NT	Homo sapiens chromosome 21 segment HS21C103
2485	12360	22254	1.54	3.0E-44	BE880626.1	EST_HUMAN	Homo sapiens carboxyl terminal LIM domain protein (CLIM1) mRNA, complete cds
3059	12986	22777	5.08	3.0E-44	AA169851.1	EST_HUMAN	Homo sapiens karyopherin alpha 6 (importin alpha 7) (KPNA6), mRNA
1033	10951	20793	2.75	2.0E-44	4826685	NT	601491529F1 NIH_MGC_69 Homo sapiens cDNA clone IMAGE:3893839 5'
1033	10951	20794	2.75	2.0E-44	4826685	NT	zp18b05.r1 Stratagene fetal retina 937202 Homo sapiens cDNA clone IMAGE:609777 5'
1189	11099	20945	4.63	2.0E-44	5803200	NT	Homo sapiens DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 1 (DDX1) mRNA
1189	11099	20946	4.63	2.0E-44	5803200	NT	Homo sapiens DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 1 (DDX1) mRNA
1290	11197	21052	2.79	2.0E-44	AF135888.1	NT	Homo sapiens transmembrane trafficking protein (TMP21), mRNA
1346	11282	21108	1.43	2.0E-44	BE465325.1	EST_HUMAN	Homo sapiens transmembrane trafficking protein (TMP21), mRNA
2105	11984	21894	2.03	2.0E-44	AF070651.1	NT	Homo sapiens RAB36 (RAB36) mRNA, complete cds
2529	12403	22294	1.1	2.0E-44	D25303.1	NT	hw14g06.x1 NCJ_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3182338 3' similar to SW:OXYB_HUMAN
							P22059 OXYSTEROL-BINDING PROTEIN. ;
							Homo sapiens tissue-type bone marrow zinc finger protein 4 mRNA, complete cds
							Human mRNA for integrin alpha subunit, complete cds

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2567	12438		3.32	2.0E-44	5901933	NT	Homo sapiens adaptor-related protein complex 4, sigma 1 subunit (CLAPS4), mRNA
3425	13342	23147	1.36	2.0E-44	D87675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
4488	14362	24152	1.76	2.0E-44	AW864379.1	EST_HUMAN	PM4-SN0016-120500-003-a04 SN0016 Homo sapiens cDNA
5709	15617	25719	1.39	2.0E-44	11449907	NT	Homo sapiens chemokine (C-C motif) receptor 9 (CCR9), mRNA
6097	15107	24870	1.46	2.0E-44	AF038968.1	NT	Homo sapiens general transcription factor 2-l (GTF2L) mRNA, alternatively spliced product, complete cds
6383	16245	26406	3.86	2.0E-44	11419226	NT	Homo sapiens glutamate receptor, metabotropic 3 (GRM3), mRNA
6383	16245	26407	3.86	2.0E-44	11419226	NT	Homo sapiens glutamate receptor, metabotropic 3 (GRM3), mRNA
7009	16886	27078	1.88	2.0E-44	BE388958.1	EST_HUMAN	601286914F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3613586 5'
9022	18816		2.22	2.0E-44	BE244902.1	EST_HUMAN	TCBAP1E2795 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBAP2795
9710	19735	24910	2.72	2.0E-44	AB002374.1	NT	Human mRNA for KIAA0376 gene, partial cds
9906	19383		1.36	2.0E-44	11526293	NT	Homo sapiens cat eye syndrome chromosome region, candidate 1 (CECR1), mRNA
46	10034	19839	3.64	1.0E-44	7657334	NT	Homo sapiens Missshapen/NIK-related kinase (MINK), mRNA
46	10034	19840	3.64	1.0E-44	7657334	NT	Homo sapiens Missshapen/NIK-related kinase (MINK), mRNA
586	10505	20312	1.85	1.0E-44	AW883132.1	EST_HUMAN	RC1-CT0249-030300-026-h12 CT0249 Homo sapiens cDNA
1179	11090		1.52	1.0E-44	AW994803.1	EST_HUMAN	RC1-BN0039-110300-012-b01 BN0039 Homo sapiens cDNA
1555	11460		5.54	1.0E-44	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
2177	12064	21965	3.53	1.0E-44	AA434554.1	EST_HUMAN	zw53402.r1 Soares, total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:773763 5' similar to contains THR.13 THR repetitive element;
2177	12064	21966	3.53	1.0E-44	AA434554.1	EST_HUMAN	zw53402.r1 Soares, total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:773763 5' similar to contains THR.13 THR repetitive element;
2237	12716	22024	1.05	1.0E-44	AA398099.1	EST_HUMAN	z188g11.r1 Soares, testis_NHT Homo sapiens cDNA clone IMAGE:728476 5'
2732	12594	22489	1.39	1.0E-44	AF196779.1	NT	Homo sapiens transcription factor IGHM enhancer 3, JM11 protein, JM4 protein, JM5 protein, T54 protein, JM10 protein, A4 differentiation-dependent protein, triple LIM domain protein 6, and synaptophysin genes, complete cds; and L-type calcium channel a>
3664	13578		5.08	1.0E-44	AA455869.1	EST_HUMAN	aa01c09.s1 Soares, Nhl-IMPu_S1 Homo sapiens cDNA clone IMAGE:811984 3'
5061	14931	24702	0.81	1.0E-44	AJ130755.1	NT	Homo sapiens alpha satellite DNA, M1 monomer type
5061	14931	24703	0.81	1.0E-44	AJ130755.1	NT	Homo sapiens alpha satellite DNA, M1 monomer type
8378	18255		10.75	1.0E-44	AV714608.1	EST_HUMAN	AV714608 DOB Homo sapiens cDNA clone DOBBYE03 5'
8816	18629	28918	4.18	1.0E-44	10092664	NT	Homo sapiens Sushi domain (SCR repeat) containing (BK65A6.2), mRNA
8869	18681	28970	3.43	1.0E-44	AW846967.1	EST_HUMAN	RC1-CT0198-150999-011-C08 CT0198 Homo sapiens cDNA
8869	18681	28971	3.43	1.0E-44	AW846967.1	EST_HUMAN	RC1-CT0198-150999-011-C08 CT0198 Homo sapiens cDNA
4476	14370	24159	1.74	9.0E-45	8922391	NT	Homo sapiens hypothetical protein FLJ10379 (FLJ10379), mRNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4476	14370	24160	1.74	9.0E-45	8922391	NT	Homo sapiens hypothetical protein FLJ10379 (FLJ10379), mRNA
2477	12353	22245	3.9	8.0E-45	5174718	NT	Homo sapiens TRK-fused gene (NOTE: non-standard symbol and name) (TFG) mRNA
5015	14899	24656	7.49	8.0E-45	5174718	NT	Homo sapiens TRK-fused gene (NOTE: non-standard symbol and name) (TFG) mRNA
3896	13806		5.25	6.0E-45	AW157570.1	EST_HUMAN	au83h07.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2782909 3' similar to SW:R13A_HUMAN P40429 60S RIBOSOMAL PROTEIN L13A ;
9707	19718		1.46	6.0E-45	11418213	NT	Homo sapiens ADP-ribosylation factor GTPase activating protein 1 (ARFGAP1), mRNA
874	10800		1.11	5.0E-45	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
1957	11852	21739	5.01	5.0E-45	BF333627.1	EST_HUMAN	CW4-CH0044-180200-515-401 CN0044 Homo sapiens cDNA
3173	13098	22904	2.01	5.0E-45	AI523766.1	EST_HUMAN	tg94f07.x1 NCI CGAP CLL1 Homo sapiens cDNA clone IMAGE:2116453 3' similar to SW:PAX1_MOUSE P09084 PAIRED BOX PROTEIN PAX-1 ;
5384	15303	25155	8.83	5.0E-45	AA397781.1	EST_HUMAN	z172d03.s1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:727877 3' similar to contains element TAR1 repetitive element ;
7226	17103	27292	1.67	5.0E-45	4759223	NT	Homo sapiens programmed cell death 5 (PDCD5), mRNA
8940	18748	28043	2.67	5.0E-45	3923698	NT	Homo sapiens golgin-like protein (GLP), mRNA
1127	11041	20883	8.96	4.0E-45	X95826.1	NT	H.sapiens ART4 gene
2246	12130	22027	1.98	4.0E-45	BE266622.1	EST_HUMAN	601194440F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3538425 5'
9613	19192		1.62	4.0E-45	BF676077.1	EST_HUMAN	602084052F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4248253 5'
3997	13210		1.17	3.0E-45	IT71480.1	EST_HUMAN	yd35f07.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:110245 5'
6920	16798		1.51	3.0E-45	AV723976.1	EST_HUMAN	AV723976 HTB Homo sapiens cDNA clone HTBAA601 5'
7104	16981	27173	3.44	3.0E-45	4758451	NT	Homo sapiens golgi autoantigen, golgin subfamily a, 2 (GOLGA2) mRNA
7907	17757	27996	8.37	3.0E-45	AL163227.2	NT	Homo sapiens chromosome 21 segment HS21C027
7907	17757	27997	8.37	3.0E-45	AL163227.2	NT	Homo sapiens chromosome 21 segment HS21C027
9814	19660		1.33	3.0E-45	X99211.1	NT	H.sapiens DNA for endogenous retroviral like element
2454	12331		2.17	2.0E-45	AL163218.2	NT	Homo sapiens chromosome 21 segment HS21C018
2996	12924	22716	0.93	2.0E-45	AJ243213.1	NT	Homo sapiens partial 5-HT4 receptor gene, exons 2 to 5
5929	15834	25957	4.82	2.0E-45	L01665.1	NT	Human eosinophil Charcot-Leyden crystal (CLC) protein (lyso-phospholipase) gene, promoter and exon 1
6489	16347	26516	1.75	2.0E-45	BE782184.1	EST_HUMAN	601467793F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3870838 5'
8179	19471	28315	27.84	2.0E-45	BE934350.1	EST_HUMAN	MRO-HT0923-190800-201-a02 HT0923 Homo sapiens cDNA
8516	18388	28652	3.96	2.0E-45	AA458770.1	EST_HUMAN	aa87f12.r1 Stratagene fetal retina 937202 Homo sapiens cDNA clone IMAGE:838319 5' similar to TR:G1144569 G1144569 R-SLY1 ;
8794	18608	28898	2.13	2.0E-45	AW270280.1	EST_HUMAN	xp72a03.x1 NCI CGAP_Ov40 Homo sapiens cDNA clone IMAGE:2746868 3'
8794	18608	28899	2.13	2.0E-45	AW270280.1	EST_HUMAN	xp72a03.x1 NCI CGAP_Ov40 Homo sapiens cDNA clone IMAGE:2746868 3'
9853	19346		2.76	2.0E-45	11418157	NT	Homo sapiens calcium channel, voltage-dependent, alpha 1I subunit (CACNA1I), mRNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
118	10349		2.22	1.0E-45	BE389855.1	EST_HUMAN	601284360F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3606183 5'
403	10349		2.7	1.0E-45	BE389855.1	EST_HUMAN	601284360F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3606183 5'
464	10407	20227	1.5	1.0E-45	4506412	NT	Homo sapiens RAP1A, member of RAS oncogene family (RAP1A), mRNA
1157	11070	20915	1.7	1.0E-45	7657290	NT	Homo sapiens Langerhans cell specific c-type lectin (LANGERIN), mRNA
3065	12992	22784	6.76	1.0E-45	U32169.1	NT	Human pro- $\alpha 2$ chain of collagen type XI (COL11A2) gene, complete cds
3447	13364	23171	1.04	1.0E-45	8659558	NT	Homo sapiens chromosome 21 open reading frame 1 (C21orf4), mRNA
3526	13442	23239	0.81	1.0E-45	AB046811.1	NT	Homo sapiens mRNA for KIAA1591 protein, partial cds
4378	14274	24055	4.08	1.0E-45	BE398633.1	EST_HUMAN	601289116F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3619803 5'
4884	14765	24541	1.05	1.0E-45	11545796	NT	Homo sapiens ribon protein (NIBAN), mRNA
7274	17151	27347	5.22	1.0E-45	BE887843.1	EST_HUMAN	601511226F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3912535 5'
7485	17355	27559	1.25	1.0E-45	AB002297.1	NT	Human mRNA for KIAA0299 gene, partial cds
9231	18950	25358	4.3	1.0E-45	11418099	NT	Homo sapiens protein kinase C, alpha binding protein (PRKCABP), mRNA
9415	19067		5.38	1.0E-45	11526291	NT	Homo sapiens hypothetical protein FLJ20454 (FLJ20454), mRNA
9421	19070		2.56	1.0E-45	11418177	NT	Homo sapiens Ran GTPase activating protein 1 (RANGAP1), mRNA
9820	19324	25207	3.17	1.0E-45	11418157	NT	Homo sapiens calcium channel, voltage-dependent, alpha 11 subunit (CACNA11), mRNA
6790	16669	26861	2.28	9.0E-46	9910293	NT	Mus musculus keratin complex 2, gene 6g (Krt2-6g), mRNA
7018	16895		6.71	9.0E-46	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
7986	17836	28077	7.89	9.0E-46	AW246964.1	EST_HUMAN	2822449.5prime NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2822449 5'
2392	12270	22165	8.79	8.0E-46	AI433261.1	EST_HUMAN	t32108.x1 NCL_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2132199 3' similar to gb:J00314_ma2 TUBULIN BETA-1 CHAIN (HUMAN);
2392	12270	22166	8.79	8.0E-46	AI433261.1	EST_HUMAN	t32108.x1 NCL_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2132199 3' similar to gb:J00314_ma2 TUBULIN BETA-1 CHAIN (HUMAN);
6992	16572		3.97	8.0E-46	BE167244.1	EST_HUMAN	RC5-HT0506-280200-012-C12 HT0506 Homo sapiens cDNA
4478	14372		6.54	7.0E-46	BE386163.1	EST_HUMAN	601277292F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3618119 5'
4701	14587		1.01	7.0E-46	BE064386.1	EST_HUMAN	RC4-BT0310-110300-015-f10 BT0310 Homo sapiens cDNA
5683	15592	25693	4.01	7.0E-46	8922708	NT	Homo sapiens hypothetical protein FLJ10847 (FLJ10847), mRNA
5912	15818	25943	1.35	7.0E-46	BF105845.1	EST_HUMAN	601822835F1 NIH_MGC_77 Homo sapiens cDNA clone IMAGE:4042736 5'
9543	19144		1.35	7.0E-46	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
2726	12588	22483	5.53	6.0E-46	AI884381.1	EST_HUMAN	wm31f08.x1 NCL_CGAP_U44 Homo sapiens cDNA clone IMAGE:2437575 3' similar to contains MER19.12 MER19 repetitive element;
2726	12588	22484	5.53	6.0E-46	AI884381.1	EST_HUMAN	wm31f08.x1 NCL_CGAP_U44 Homo sapiens cDNA clone IMAGE:2437575 3' similar to contains MER19.12 MER19 repetitive element;
5727	15634	25737	8.85	6.0E-46	AI635448.1	EST_HUMAN	ts58h10.x1 NCL_CGAP_Kid8 Homo sapiens cDNA clone IMAGE:2232835 3' similar to TR:O60363 O60363 SA GENE.;

Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8694	17878		3.03	6.0E-46	BE784971.1	EST_HUMAN	601478409F1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3880995 5'
197	10169		6.41	5.0E-46	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
3484	13400	23205	1.12	5.0E-46	BE677194.1	EST_HUMAN	7d81g01.x1 Lupski_dorsal_root_ganglion Homo sapiens cDNA clone IMAGE:3279408 3'
3484	13400	23206	1.12	5.0E-46	BE677194.1	EST_HUMAN	7d81g01.x1 Lupski_dorsal_root_ganglion Homo sapiens cDNA clone IMAGE:3279408 3'
6039	15942	26074	1.79	5.0E-46	BF590442.1	EST_HUMAN	nae38f07.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3256757 3' similar to TR:O75202
6144	16017	26155	3.52	5.0E-46	BF347229.1	EST_HUMAN	O75202 HOMOLOG OF RAT KIDNEY-SPECIFIC;
625	10562		1.51	4.0E-46	AA601143.1	EST_HUMAN	602021164F1 NCI_CGAP_Bm67 Homo sapiens cDNA clone IMAGE:4156670 5'
							no54e09.s1 NCI_CGAP_SS1 Homo sapiens cDNA clone IMAGE:1104520 3' similar to gb:X63741_rna1 FIBULIN-1, ISOFORM A PRECURSOR (HUMAN);
1676	11578	21446	3.57	4.0E-46	AW770544.1	EST_HUMAN	h186c03.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3008836 3' similar to gb:X14008_rna1 LYSOZYME C PRECURSOR (HUMAN); contains element MER37 repetitive element;
1676	11578	21447	3.57	4.0E-46	AW770544.1	EST_HUMAN	h186c03.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3008836 3' similar to gb:X14008_rna1 LYSOZYME C PRECURSOR (HUMAN); contains element MER37 repetitive element;
2710	12573	22464	3.55	4.0E-46	M18048.1	NT	Human endogenous retrovirus RTVL-H2
4320	14217	23999	1.07	4.0E-46	AB014522.1	NT	Homo sapiens mRNA for KIAA0622 protein, partial cds
4320	14217	24000	1.07	4.0E-46	AB014522.1	NT	Homo sapiens mRNA for KIAA0622 protein, partial cds
5338	15258	25082	1.84	4.0E-46	M36852.1	NT	Human Ig germline gamma-3 heavy-chain gene V region, partial cds
5338	15258	25083	1.84	4.0E-46	M36852.1	NT	Human Ig germline gamma-3 heavy-chain gene V region, partial cds
9660	19221	25237	1.91	4.0E-46	AB002059.1	NT	Homo sapiens DNA for Human P2XM, complete cds
4294	14192	23976	0.8	3.0E-46	4506376	NT	Homo sapiens mitogen-activated protein kinase kinase kinase 3 (MAP4K3), mRNA
4666	14552	24343	1.13	3.0E-46	Z73660.1	NT	H. sapiens Ig lambda light chain variable region gene (7c.11.2) germline; Ig-Light-Lambda, VLambda
4666	14552	24344	1.13	3.0E-46	Z73660.1	NT	H. sapiens Ig lambda light chain variable region gene (7c.11.2) germline; Ig-Light-Lambda; VLambda
7081	16958	27151	8.3	3.0E-46	AB831492.1	EST_HUMAN	wj49c04.x1 NCI_CGAP_Lu19 Homo sapiens cDNA clone IMAGE:2406150 3' similar to contains THR.b2 THR repetitive element;
8856	18668	28955	2.63	3.0E-46	D31765.1	NT	Human mRNA for KIAA0061 gene, partial cds
819	10747	20594	5.91	2.0E-46	AA468646.1	EST_HUMAN	ne06a09.s1 NCI_CGAP_Co3 Homo sapiens cDNA clone IMAGE:880408 3' similar to contains THR.b2 THR repetitive element;
1542	11447		1.32	2.0E-46	AA678246.1	EST_HUMAN	Z27a11.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:431996 3'
1623	11527	21385	2.43	2.0E-46	U78027.1	NT	Homo sapiens Bruton's tyrosine kinase (BTK), alpha-D-galactosidase A (GLA), L44-like ribosomal protein (L44L) and FTP3 (FTP3) genes, complete cds

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NC:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4899	14779	24555	1.15	2.0E-46	AA399286.1	EST_HUMAN	zt59e02.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:726650 5' similar to SW:RSP1_MOUSE Q01730 RSP-1 PROTEIN. ;
6418	16280	26442	6.78	2.0E-46	9910569	NT	Mus musculus sperm tail associated protein (Step), mRNA
6703	16583		1.17	2.0E-46	BE869151.1	EST_HUMAN	601445137F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3849297 5'
8571	18439		1.87	2.0E-46	7657233	NT	Homo sapiens small acidic protein (IMAGE145052), mRNA
9157	19629		1.75	2.0E-46	BF028854.1	EST_HUMAN	601765225F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3997326 5'
9409	19525		1.44	2.0E-46	H48391.1	EST_HUMAN	y32d01.r1 Soares fetal liver spleen 1NfLS Homo sapiens cDNA clone IMAGE:206977 5'
9728	19515	25136	3.81	2.0E-46	AW277214.1	EST_HUMAN	xq78h03.x1 NCL_CGAP_Lu34 Homo sapiens cDNA clone IMAGE:2756789 3'
1213	11121	20970	5.19	1.0E-46	4502694	NT	Homo sapiens cell division cycle 10 (homologous to CDC10 of S. cerevisiae) (CDC10) mRNA
2236	12121	22023	4.6	1.0E-46	AW978516.1	EST_HUMAN	EST390625 MAGC resequences, MAGP Homo sapiens cDNA
2351	12231	22128	2.59	1.0E-46	H97330.1	EST_HUMAN	EST486095 WATM1 Homo sapiens cDNA clone 486095
3211	13135	22936	2.81	1.0E-46	AA631912.1	EST_HUMAN	np78b02.s1 NCL_CGAP_P12 Homo sapiens cDNA clone IMAGE:1132395 similar to gb:X76717 H.sapiens MT-1 mRNA. (HUMAN);
4772	14686		2.64	1.0E-46	AB023197.1	NT	Homo sapiens mRNA for KIAA0980 protein, partial cds
5495	15414	25477	4.18	1.0E-46	BF194707.1	EST_HUMAN	7c92b01.x1 NCL_CGAP_Ov18 Homo sapiens cDNA clone IMAGE:3643705 3'
5636	19449	25639	5.66	1.0E-46	8923762	NT	Homo sapiens centaurin-alpha 2 protein (HSA272195), mRNA
5636	19449	25640	5.66	1.0E-46	8923762	NT	Homo sapiens centaurin-alpha 2 protein (HSA272195), mRNA
8286	15414	25477	4.26	1.0E-46	BF194707.1	EST_HUMAN	7c92b01.x1 NCL_CGAP_Ov18 Homo sapiens cDNA clone IMAGE:3643705 3'
9188	18923	25348	1.43	1.0E-46	BF531102.1	EST_HUMAN	602072264F1 NCL_CGAP_Bm67 Homo sapiens cDNA clone IMAGE:4215398 5'
9188	18923	25349	1.43	1.0E-46	BF531102.1	EST_HUMAN	602072264F1 NCL_CGAP_Bm67 Homo sapiens cDNA clone IMAGE:4215398 5'
9925	19397		1.53	1.0E-46	AV715377.1	EST_HUMAN	AV715377 DCB Homo sapiens cDNA clone DCBAIE03 5'
749	10679		4.51	9.0E-47	AJ271735.1	NT	Homo sapiens Xq pseudoautosomal region; segment 1/2
4848	14729	24512	2.61	9.0E-47	AW770928.1	EST_HUMAN	H93e04.x1 NCL_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3009534 3' similar to TR:075703 O75703 HYPOTHETICAL 12.4 KD PROTEIN. ;
9682	19617	25001	1.84	9.0E-47	11417966	NT	Homo sapiens SEC14 (S. cerevisiae)-like 2 (SEC14L2), mRNA
1766	11665	21539	14.02	8.0E-47	Y18536.1	NT	Homo sapiens HLA-C gene, exon 5, individual 19323
1766	11665	21540	14.02	8.0E-47	Y18536.1	NT	Homo sapiens HLA-C gene, exon 5, individual 19323
2684	12549	22439	1.74	8.0E-47	5453955	NT	Homo sapiens protein phosphatase 2, regulatory subunit B (B56), epsilon isoform (PPP2R5E) mRNA
2989	12917	22712	1.72	8.0E-47	AJ229043.1	NT	Homo sapiens 955 kb contig between AML1 and CBR1 on chromosome 21q22, segment 3/3
2501	12376	22266	3.05	6.0E-47	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
7344	17212	27411	6.27	6.0E-47	A1695189.1	EST_HUMAN	tz88h02.x1 NCL_CGAP_K1d11 Homo sapiens cDNA clone IMAGE:2299659 3'
5963	15868	25690	5.27	5.0E-47	11423972	NT	Homo sapiens CDC37 (cell division cycle 37, S. cerevisiae, homolog) (CDC37), mRNA
8174	18082		3.91	5.0E-47	MT8590.1	EST_HUMAN	EST00738 Fetal brain, Stragelene (cat#936206) Homo sapiens cDNA clone HFBCF07



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Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1379	11284	21140	3.41	4.0E-47	4557566	NT	Homo sapiens E1A binding protein p300 (EP300) mRNA
6938	16816	27008	2.06	4.0E-47	BE616483.1	EST_HUMAN	601280486F1 NIH_MGC_39 Homo sapiens cDNA clone IMAGE:3622437 5'
6938	16816	27009	2.06	4.0E-47	BE616483.1	EST_HUMAN	601280486F1 NIH_MGC_39 Homo sapiens cDNA clone IMAGE:3622437 5'
8905	18713		4.84	4.0E-47	AW515509.1	EST_HUMAN	xx66b07.x1 NCI_CGAP_Lym12 Homo sapiens cDNA clone IMAGE:2848597 3' similar to SW:INT6_MOUSE
532	10474	20287	1.75	3.0E-47	BE907634.1	EST_HUMAN	Q64252 VIRAL INTEGRATION SITE PROTEIN INT-6, [1];
532	10474	20288	1.75	3.0E-47	BE907634.1	EST_HUMAN	601497639F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3899721 5'
801	10730	20571	5.17	3.0E-47	N57483.1	EST_HUMAN	601497639F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3899721 5'
930	10855	20703	8.9	3.0E-47	AL163284.2	NT	yy64b04.s1 Soares_multiple_sclerosis_2NbHMSP Homo sapiens cDNA clone IMAGE:277327 3'
1984	11877	21770	1.5	3.0E-47	AB007899.1	NT	Homo sapiens chromosome 21 segment HS21C084
3885	13796		4.99	3.0E-47	U93181.1	NT	Homo sapiens KIAA0439 mRNA, partial cds
4265	14164	23941	0.97	3.0E-47	M12959.1	NT	Homo sapiens nuclear dual-specificity phosphatase (SBF1) mRNA, partial cds
5699	15571	25666	4.26	3.0E-47	AW408800.1	EST_HUMAN	Human T-cell receptor active alpha-chain mRNA from JM cell line, complete cds
5699	15571	25667	4.26	3.0E-47	AW408800.1	EST_HUMAN	UI-HF-BM0-adv-d-07-0-U1.r1 NIH_MGC_38 Homo sapiens cDNA clone IMAGE:3063205 5'
5953	15858		1.89	3.0E-47	AI222413.1	EST_HUMAN	UI-HF-BM0-adv-d-07-0-U1.r1 NIH_MGC_38 Homo sapiens cDNA clone IMAGE:3063205 5'
142	10116	19936	4.27	2.0E-47	4505318	NT	qh04e07.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1843716 3'
952	10876	20722	2.18	2.0E-47	AL163209.2	NT	Homo sapiens myosin phosphatase, target subunit 2 (MYPT2), mRNA
952	10876	20723	2.18	2.0E-47	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
1548	11453		1.18	2.0E-47	AI999279.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C009
1575	11479	21338	1.22	2.0E-47	7662109	NT	wq96b02.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2479851 3'
1654	11557	21420	4.44	2.0E-47	AA524514.1	EST_HUMAN	Homo sapiens KIAA0426 gene product (KIAA0426), mRNA
2185	12072	21974	2.3	2.0E-47	AF060568.1	NT	ng43h12.s1 NCI_CGAP_Co3 Homo sapiens cDNA clone IMAGE:937607 3'
4261	14150	23924	1.66	2.0E-47	4504866	NT	Homo sapiens promyelocytic leukemia zinc finger protein (PLZF) gene, complete cds
4287	14186	23967	1.75	2.0E-47	AA569692.1	EST_HUMAN	Homo sapiens ring finger protein (C3HC4 type 8) (RNF8), mRNA
4287	14186	23968	1.75	2.0E-47	AA569692.1	EST_HUMAN	nf23g07.s1 NCI_CGAP_P1 Homo sapiens cDNA clone IMAGE:914652
4406	14300	24084	2.06	2.0E-47	5174648	NT	nf23g07.s1 NCI_CGAP_P1 Homo sapiens cDNA clone IMAGE:914652
4707	14593	24384	1.1	2.0E-47	AW995166.1	EST_HUMAN	Homo sapiens Rev/Rex activation domain binding protein-related (RAB-R) mRNA
5635	15549	25637	1.6	2.0E-47	BE778475.1	EST_HUMAN	EST1377239 MAGI resequences, MAGI Homo sapiens cDNA
5635	15549	25638	1.6	2.0E-47	BE778475.1	EST_HUMAN	601463932F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3867487 5'
6532	19464		1.33	2.0E-47	LO9731.1	NT	601463932F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3867487 5'
6643	16523	26716	2.1	2.0E-47	D87675.1	NT	Homo sapiens 5-hydroxytryptamine 1D receptor pseudogene with an Alu repeat insertion
6643	16523	26717	2.1	2.0E-47	D87675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
7060	16937	27127	1.77	2.0E-47	AF071771.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
9070	10116	19936	5.77	2.0E-47	4505318	NT	Homo sapiens SPH-binding factor mRNA, partial cds
							Homo sapiens myosin phosphatase, target subunit 2 (MYPT2), mRNA

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Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9219	19658	24988	1.98	2.0E-47	R42423.1	EST_HUMAN	yf92e08.s1 Soares infant brain 1NIB Homo sapiens cDNA clone IMAGE:29966 3' similar to contains OFR
9257	19659		1.32	2.0E-47	AL163209.2	NT	repetitive element ;
1383	11288	21142	4.5	1.0E-47	A1333429.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C009
3749	13682	23443	0.79	1.0E-47	BE280477.1	EST_HUMAN	qp99h03.x1 Soares_fetal_lung_NHL19W Homo sapiens cDNA clone IMAGE:1931189 3'
3749	13682	23444	0.79	1.0E-47	BE280477.1	EST_HUMAN	601155321F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3138893 5'
5008	14882	24648	2.59	1.0E-47	AW813906.1	EST_HUMAN	601155321F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3138893 5'
6194	15954	26086	7.68	1.0E-47	A1890886.1	EST_HUMAN	RC3-ST0197-130400-017-h02 ST0197 Homo sapiens cDNA
7928	17778	28017	1.75	1.0E-47	L30115.1	NT	at19e06.x1 Barstead aorta HPLRB6 Homo sapiens cDNA clone IMAGE:2355586 3' similar to gb:M22995
1595	11499	21358	2.34	9.0E-48	AF223391.1	NT	RAS-RELATED PROTEIN RAP-1A (HUMAN);
3509	13425	23228	0.83	9.0E-48	BF359947.1	EST_HUMAN	Papio hamadryas alcohol dehydrogenase class I (ADH) gene, 5' region
8460	18333	28595	3.22	9.0E-48	BE393813.1	EST_HUMAN	Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
1230	11138		1.32	8.0E-48	4501900	NT	CM2-MT0100-310700-290-f05 MT0100 Homo sapiens cDNA
1231	11138		1.51	8.0E-48	4501900	NT	601310479F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3632083 5'
3096	13023	22818	3.62	8.0E-48	AW768477.1	EST_HUMAN	Homo sapiens aminocyclase 1 (ACY1). mRNA
3096	13023	22819	3.62	8.0E-48	AW768477.1	EST_HUMAN	Homo sapiens aminocyclase 1 (ACY1). mRNA
482	10426		1.37	7.0E-48	AB033035.1	NT	hk61b03.x1 NCI_CGAP_Lym12 Homo sapiens cDNA clone IMAGE:3001133 3' similar to gb:X64707
483	10426		13.37	7.0E-48	AB033035.1	NT	BREAST BASIC CONSERVED PROTEIN 1 (HUMAN);
1482	11387	21250	1.12	7.0E-48	6912719	NT	hk61b03.x1 NCI_CGAP_Lym12 Homo sapiens cDNA clone IMAGE:3001133 3' similar to gb:X64707
1620	11524	21382	3.49	7.0E-48	5730038	NT	BREAST BASIC CONSERVED PROTEIN 1 (HUMAN);
5947	15852	25975	22.88	7.0E-48	11418831	NT	Homo sapiens mRNA for KIAA1209 protein, partial cds
7275	17152	27348	1.52	6.0E-48	AF026816.1	NT	Homo sapiens mRNA for KIAA1209 protein, partial cds
7500	17370	27577	1.9	6.0E-48	11427428	NT	Homo sapiens tousel-like kinase 1 (TLK1). mRNA
7587	17438	27654	3.38	6.0E-48	AA189080.1	EST_HUMAN	Homo sapiens SET domain and mariner transposase fusion gene (SETMAR). mRNA
3289	15067	22989	1.39	5.0E-48	4828891	NT	Homo sapiens histidyl-tRNA synthetase (HARS). mRNA
8325	18202	28451	3.55	4.0E-48	A1620420.1	EST_HUMAN	Homo sapiens putative oncogene protein mRNA, partial cds
1363	11269	21124	0.92	3.0E-48	AV690964.1	EST_HUMAN	Homo sapiens hypothetical protein FLJ11006 (FLJ11006). mRNA
1933	11828	21710	18.97	3.0E-48	4885170	NT	zq45b06.s1 Stralagene hNT neuron (#937233) Homo sapiens cDNA clone IMAGE:632627 3' similar to contains Alu repetitive element;
1933	11828	21711	18.97	3.0E-48	4885170	NT	Homo sapiens phosphodiesterase 1A, calmodulin-dependent (PDE1A). mRNA
							tu47a02.x1 NCI_CGAP_Pr28 Homo sapiens cDNA clone IMAGE:2254154 3'
							AV690964 GKc Homo sapiens cDNA clone GKCDRE12 5'
							Homo sapiens chromosome X open reading frame 6 (CXORF6) mRNA
							Homo sapiens chromosome X open reading frame 6 (CXORF6) mRNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3579	13493	23284	0.88	3.0E-48	AW664531.1	EST_HUMAN	h14b12.x1 NCI_CGAP_GU1 Homo sapiens cDNA clone IMAGE:2972255 3' similar to SW:DCRB_HUMAN
5592	15507	25582	2.35	3.0E-48	BE084571.1	EST_HUMAN	P56555 DOWN SYNDROME CRITICAL REGION PROTEIN B. ;
6889	16768		2.86	3.0E-48	AA659930.1	EST_HUMAN	MR4-BT0657-060400-201-e10 BT0657 Homo sapiens cDNA
8248	18128	28376	7.08	3.0E-48	BF514170.1	EST_HUMAN	nv03f05.s1 NCI_CGAP_P122 Homo sapiens cDNA clone IMAGE:1219137 3' similar to contains PTR5.b1
39	10027	19827	1.18	2.0E-48	AA631940.1	EST_HUMAN	PTR5 repetitive element ;
4431	14326	24114	1.35	2.0E-48	BE246065.1	EST_HUMAN	UI-H-BW1-ant-a-10-0-U.s1 NCI_CGAP_Sub7 Homo sapiens cDNA clone IMAGE:3082267 3'
5553	15469	25539	72.29	2.0E-48	AA613171.1	EST_HUMAN	fmc7 Regional genomic DNA specific cDNA library Homo sapiens cDNA clone CR17-26
5553	15469	25540	72.29	2.0E-48	AA613171.1	EST_HUMAN	TCBAP1D3842 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBAP3842
6440	16301	28464	4.29	2.0E-48	AB040934.1	NT	not18g01.s1 NCI_CGAP_Phe1 Homo sapiens cDNA clone IMAGE:1101072 3'
6440	16301	28465	4.29	2.0E-48	AB040934.1	NT	not18g01.s1 NCI_CGAP_Phe1 Homo sapiens cDNA clone IMAGE:1101072 3'
6447	16308	26473	2.9	2.0E-48	11496238	NT	Homo sapiens mRNA for KIAA1501 protein, partial cds
6864	16743	28936	2.39	2.0E-48	AV743451.1	EST_HUMAN	Homo sapiens v-rel avian reticulendotheliosis viral oncogene homolog A (nuclear factor of kappa light polypeptide gene enhancer in B-cells 3 (p65)) (RELA), mRNA
9184	15082	24828	2.45	2.0E-48	AA465007.1	EST_HUMAN	AV743451 CB Homo sapiens cDNA clone CBCCGG10 5'
9511	19579	25070	1.63	2.0E-48	BE737154.1	EST_HUMAN	zx80c03.r1 Soares ovary tumor NBH0T Homo sapiens cDNA clone IMAGE:810052 5'
50	10037	19844	0.85	1.0E-48	7706534	NT	601305064F1 NIH_MGC_39 Homo sapiens cDNA clone IMAGE:3689782 5'
855	10782	20632	6.93	1.0E-48	4502166	NT	Homo sapiens cisplatin resistance-associated overexpressed protein (LOC51747), mRNA
1274	11182	21032	3.26	1.0E-48	5032032	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
1876	11772	21648	44.65	1.0E-48	AL163302.2	NT	Homo sapiens RNA binding motif protein 6 (RBM6) mRNA
3443	13360	23167	1.23	1.0E-48	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C102
5082	14952	24728	1.1	1.0E-48	M10976.1	NT	Homo sapiens chromosome 21 segment HS21C046
6303	16167	26325	2.21	1.0E-48	4755137	NT	Human endogenous retroviral DNA (4-1), complete retroviral segment
7337	17205	27404	5.72	1.0E-48	AB033071.1	NT	Homo sapiens huntingtin (Huntington disease) (HD) mRNA
7526	17377	27586	4.48	1.0E-48	BF304683.1	EST_HUMAN	Homo sapiens mRNA for KIAA1245 protein, partial cds
7934	17784	28023	5.05	1.0E-48	11429808	NT	601888096F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4122119 5'
7934	17784	28024	5.06	1.0E-48	11429808	NT	Homo sapiens B cell linker protein (SLP65), mRNA
8999	18802	29094	1.73	1.0E-48	AF119117.1	NT	Homo sapiens B cell linker protein (SLP65), mRNA
8999	18802	29095	1.73	1.0E-48	AF119117.1	NT	Homo sapiens dopamine transporter (SLC6A3) gene, complete cds
9145	19606		1.56	1.0E-48	W26785.1	EST_HUMAN	Homo sapiens dopamine transporter (SLC6A3) gene, complete cds
5692	15601	25702	2.95	8.0E-49	10048417	NT	15d6 Human retina cDNA randomly primed sublibrary Homo sapiens cDNA
							Mus musculus T-box 20 (Tbx20), mRNA

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Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5682	15601	25703	2.95	8.0E-49	10048417	NT	Mus musculus T-box 20 (Tbx20), mRNA
6827	16706	26900	3.19	8.0E-49	U23830.1	NT	Human inositol 1,4,5 trisphosphate receptor type 1 mRNA, partial cds
134	10335	20157	1.47	7.0E-49	5729990	NT	Homo sapiens proteasome (prosome, macropain) 26S subunit, ATPase, 4 (PSMC4) mRNA
134	10335	20158	1.47	7.0E-49	5729990	NT	Homo sapiens proteasome (prosome, macropain) 26S subunit, ATPase, 4 (PSMC4) mRNA
388	10335	20157	1.74	7.0E-49	5729990	NT	Homo sapiens proteasome (prosome, macropain) 26S subunit, ATPase, 4 (PSMC4) mRNA
388	10335	20158	1.74	7.0E-49	5729990	NT	Homo sapiens proteasome (prosome, macropain) 26S subunit, ATPase, 4 (PSMC4) mRNA
389	10335	20157	1.99	7.0E-49	5729990	NT	Homo sapiens proteasome (prosome, macropain) 26S subunit, ATPase, 4 (PSMC4) mRNA
389	10335	20158	1.99	7.0E-49	5729990	NT	Homo sapiens proteasome (prosome, macropain) 26S subunit, ATPase, 4 (PSMC4) mRNA
1202	11112	20958	4.05	7.0E-49	AL163284.2	NT	Homo sapiens proteasome (prosome, macropain) 26S subunit, ATPase, 4 (PSMC4) mRNA
4560	14443	24227	0.95	7.0E-49	O60811	SWISSPROT	Homo sapiens chromosome 21 segment HS21C084
							HYPOTHETICAL PROTEIN DJ845O24.3
5351	15271	25100	1.93	7.0E-49	AI807191.1	EST_HUMAN	wf25h04.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2356663 3' similar to TR:O54923
5357	15277	25107	1.34	7.0E-49	AL120937.1	EST_HUMAN	O54923 RSEC15 ;
							DKFZp762C033.s1.762 (synonym: hmel2) Homo sapiens cDNA clone DKFZp762C033 3'
190	10162	19979	11.77	6.0E-49	AW731740.1	EST_HUMAN	ba55g05.x1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:2900504 3' similar to gb:X17206.40S
8600	18467	28738	2.92	6.0E-49	AW452218.1	EST_HUMAN	RIBOSOMAL PROTEIN S4 (HUMAN); gb:M20632 Mouse LLRep3 protein mRNA from a repetitive element, complete (MOUSE);
8920	18728	29022	2.69	6.0E-49	AA369556.1	EST_HUMAN	UI-H-B13-alc-a-05-0-UI.s1 NCI_CGAP_Sub5 Homo sapiens cDNA clone IMAGE:3068048 3'
8920	18728	29023	2.69	6.0E-49	AA369556.1	EST_HUMAN	EST77525 Pancreas tumor III Homo sapiens cDNA 5' end
9507	19498		3.43	6.0E-49	AA707567.1	EST_HUMAN	EST77525 Pancreas tumor III Homo sapiens cDNA 5' end
635	10628	20452	3.37	5.0E-49	AL163210.2	NT	z29c08.s1 Soares_fetal_liver_spleen_1NLS_S1 Homo sapiens cDNA clone IMAGE:451694 3'
695	10628	20453	3.37	5.0E-49	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
						NT	Homo sapiens chromosome 21 segment HS21C010
							zp29c07.r1 Straglene neuroepithelium (#937231) Homo sapiens cDNA clone IMAGE:610860 5' similar to
1753	11653	21524	1.94	5.0E-49	AA172121.1	EST_HUMAN	TR:G233226 G233226 RTVL-H PROTEIN ; contains LTR7.13 LTR7 LTR7 repetitive element ;
2721	12583	22477	5.18	5.0E-49	U17714.1	NT	Homo sapiens putative tumor suppressor ST13 (ST13) mRNA, complete cds
3235	13159	22957	5.13	5.0E-49	11436355	NT	Homo sapiens similar to ribosomal protein S27 (metallopanstimulin 1) (H. sapiens) (LOC633362), mRNA
514	10456	20266	37.46	4.0E-49	AW189533.1	EST_HUMAN	x08b01.x1 NCI_CGAP_U14 Homo sapiens cDNA clone IMAGE:2675593 3' similar to WP:B0350.2B
9376	19710		2.43	4.0E-49	AA210798.1	EST_HUMAN	CE06703 ;
9459	19090		3.3	4.0E-49	AF240786.1	NT	z190f05.r1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:682977 5'
548	10489	20298	0.93	3.0E-49	X68968.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
							H. sapiens mRNA for acetyl-CoA carboxylase

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2611	12479		2.01	3.0E-49	AA016131.1	EST_HUMAN	ze31c05.r1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:360584 5' similar to contains L1.f3 L1 repetitive element;
4909	14788	24564	2.08	3.0E-49	U46999.1	NT	Human type IV collagen (COL4A6) gene, exon 40
6386	16248	26409	9.6	3.0E-49	H39479.1	EST_HUMAN	EST25e12 WATM1 Homo sapiens cDNA clone 25e12
8621	18487	28759	2.3	3.0E-49	AA337561.1	EST_HUMAN	EST42572 Endometrial tumor Homo sapiens cDNA 5' end
645	10582		2.66	2.0E-49	BE165980.1	EST_HUMAN	MR3-HT0487-150200-113-g01 HT0487 Homo sapiens cDNA
3185	13110	22914	1.4	2.0E-49	N26446.1	EST_HUMAN	yx23d06.r1 Soares melanocyte 2NbHM Homo sapiens cDNA clone IMAGE:262571 5'
3521	13437	23235	0.93	2.0E-49	AF026564.1	NT	Homo sapiens RNA binding protein II (RBMII) gene, complete cds
4683	14579	24373	1.12	2.0E-49	AI167357.1	EST_HUMAN	oz88d02.x1 Soares senescent fibroblasts. NbHSF Homo sapiens cDNA clone IMAGE:1682403 3' similar to gb:M31470 RAS-LIKE PROTEIN TC10 (HUMAN); contains Alu repetitive element; contains element MER22 repetitive element;
4704	14590	24381	1.25	2.0E-49	BF511846.1	EST_HUMAN	UI-H-B14-aps-d-02-Q-UJ.s1 NCI_CGAP_Sub8 Homo sapiens cDNA clone IMAGE:3088538 3'
6040	15943	26075	1.47	2.0E-49	AV717938.1	EST_HUMAN	AV717938 DCB Homo sapiens cDNA clone DCBALB01 5'
6717	16597		1.97	2.0E-49	M60333.1	EST_HUMAN	EST02558 Fetal brain, Strategene (cat#936206) Homo sapiens cDNA clone HFCY60
9467	19599		1.53	2.0E-49	AF163864.1	NT	Homo sapiens SNCA isoform (SNCA) gene, complete cds, alternatively spliced
881	10807		3.95	1.0E-49	BF038327.1	EST_HUMAN	601458531F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3862086 5'
1760	11689	21531	2.58	1.0E-49	BE255216.1	EST_HUMAN	601115769F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3356273 5'
5289	15210	25011	4.97	1.0E-49	BF131007.1	EST_HUMAN	601820053F1 NIH_MGC_58 Homo sapiens cDNA clone IMAGE:4052052 5'
6287	16151	26307	2.93	1.0E-49	BE398110.1	EST_HUMAN	601290330F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3620863 5'
6287	16151	26308	2.93	1.0E-49	BE398110.1	EST_HUMAN	601290330F1 NIH_MGC_8 Homo sapiens cDNA clone IMAGE:3620863 5'
6322	16185	26346	2.17	1.0E-49	N25884.1	EST_HUMAN	yw78g12.s1 Soares placenta_8to9weeks_2NbHP8to9W Homo sapiens cDNA clone IMAGE:258406 3' similar to gb:X65873 KINESIN HEAVY CHAIN (HUMAN);
6322	16185	26347	2.17	1.0E-49	N25884.1	EST_HUMAN	yw78g12.s1 Soares placenta_8to9weeks_2NbHP8to9W Homo sapiens cDNA clone IMAGE:258406 3' similar to gb:X65873 KINESIN HEAVY CHAIN (HUMAN);
6709	16589	26777	1.29	1.0E-49	11321580	NT	Homo sapiens succinate-CoA ligase, GDP-forming, alpha subunit (SUCLG1), mRNA
6709	16589	26778	1.29	1.0E-49	11321580	NT	Homo sapiens succinate-CoA ligase, GDP-forming, alpha subunit (SUCLG1), mRNA
7200	17077	27262	1.22	1.0E-49	BE409340.1	EST_HUMAN	601300992F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3635398 5'
7830	17680	27924	1.21	1.0E-49	AL043129.2	EST_HUMAN	DKFZp434D2423_j1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434D2423 5'
8630	18495	28769	3.88	1.0E-49	11427366	NT	Homo sapiens brefeldin A-inhibited guanine nucleotide-exchange protein 1 (BIG1), mRNA
9018	18813		1.73	1.0E-49	BE159343.1	EST_HUMAN	MRO-HT0407-010200-006-f02 HT0407 Homo sapiens cDNA
9367	19035		2	1.0E-49	11418322	NT	Homo sapiens cadherin EGF LAG seven-pass G-type receptor 1 (CELSR1), mRNA
4923	14802		1.06	9.0E-50	AF101475.1	NT	Homo sapiens glycine N-methyltransferase (GNMT) gene, complete cds
163	10136	19951	2.59	8.0E-50	AL163202.2	NT	Homo sapiens chromosome 21 segment HS21C002
702	10635	20460	1.89	8.0E-50	X95097.2	NT	Homo sapiens mRNA for VIP receptor 2

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
702	10635	20461	1.89	8.0E-50	X95097.2	NT	Homo sapiens mRNA for VIP receptor 2
1016	10934		1.21	8.0E-50	AF005073.1	NT	Homo sapiens homogenisate 1,2-dioxygenase gene, complete cds
1727	11628	21497	2.51	8.0E-50	4501890	NT	Homo sapiens actinin, alpha 1 (ACTN1) mRNA
2432	12309	22204	1.36	8.0E-50	7706394	NT	Homo sapiens p47 (LOC51674), mRNA
2432	12309	22205	1.36	8.0E-50	7706394	NT	Homo sapiens p47 (LOC51674), mRNA
2666	12531	22421	1.69	8.0E-50	4826658	NT	Homo sapiens capping protein (actin filament) muscle Z-line, beta (CAPZB), mRNA
8711	18528	28811	2.1	8.0E-50	AA633467.1	EST_HUMAN	np62d06.s1 NCL_CGAP_B2 Homo sapiens cDNA clone IMAGE:1130891 3' similar to gb:J05459
603	10539	20349	0.96	7.0E-50	BE089591.1	EST_HUMAN	GLUTATHIONE S-TRANSFERASE TESTIS/BRAIN (HUMAN);
8139	18027	28273	9.52	7.0E-50	AI872137.1	EST_HUMAN	QV0-BT0703-280400-211-e08 BT0703 Homo sapiens cDNA
6781	16860		4.47	6.0E-50	BE044076.1	EST_HUMAN	wn55g11.x1 NCL_CGAP_U12 Homo sapiens cDNA clone IMAGE:2439908 3'
8190	18076	28326	3.17	6.0E-50	AA312079.1	EST_HUMAN	h036h04.x1 NCL_CGAP_U11 Homo sapiens cDNA clone IMAGE:3039511 3' similar to contains MER29.b3
8190	18076	28327	3.17	6.0E-50	AA312079.1	EST_HUMAN	MER29 repetitive element ;
1752	11652	21522	0.85	5.0E-50	BF332938.1	EST_HUMAN	EST182775 Jurkat T-cells VI Homo sapiens cDNA 5' end
1752	11652	21523	0.85	5.0E-50	BF332938.1	EST_HUMAN	EST182775 Jurkat T-cells VI Homo sapiens cDNA 5' end
7255	17132		5.64	5.0E-50	AA557683.1	EST_HUMAN	CM0-BT0792-300500-398-b05 BT0792 Homo sapiens cDNA
8991	18795	29086	1.85	5.0E-50	AA403053.1	EST_HUMAN	CM0-BT0792-300500-398-b05 BT0792 Homo sapiens cDNA
899	10824		1.29	4.0E-50	AA601143.1	EST_HUMAN	nl45h10.s1 NCL_CGAP_P14 Homo sapiens cDNA clone IMAGE:1043683 similar to contains PTR5.i3 PTR6
1896	11791		2.45	3.0E-50	M18048.1	NT	repetitive element ;
3259	13182	22981	1.14	3.0E-50	AA746142.1	EST_HUMAN	z62b01.r1 Soares testis NHT Homo sapiens cDNA clone IMAGE:728889 5' similar to TR:G1335769
3692	13606	23392	4.6	3.0E-50	AW755254.1	EST_HUMAN	G1335769 GAG-POL POLYPROTEIN ;
6056	16039	26180	1.55	3.0E-50	11421514	NT	h054e09.s1 NCL_CGAP_SS1 Homo sapiens cDNA clone IMAGE:1104520 3' similar to gb:X53741_ma1
6505	16364	26540	4.01	3.0E-50	AF233436.2	NT	FIBULIN-1, ISOFORM A PRECURSOR (HUMAN);
6505	16364	26541	4.01	3.0E-50	AF233436.2	NT	Human endogenous retrovirus RTVL-H2
7649	17499	27721	1.17	3.0E-50	AB046818.1	NT	ob03f06.s1 NCL_CGAP_Kid3 Homo sapiens cDNA clone IMAGE:1322627 3'
8760	17909	28153	5.94	3.0E-50	AJ245621.1	NT	CMYA5 Human cardiac muscle expression library Homo sapiens cDNA clone 4151935 similar to CMYA5
							Cardiomyopathy associated gene 5
							Homo sapiens similar to sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3A (H. sapiens) (LOC63232), mRNA
							Homo sapiens FYVE domain-containing dual specificity protein phosphatase FYVE-DSP1a mRNA, complete cds
							Homo sapiens FYVE domain-containing dual specificity protein phosphatase FYVE-DSP1a mRNA, complete cds
							Homo sapiens mRNA for KIAA1598 protein, partial cds
							Homo sapiens CTL2 gene

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
761	10691		4.91	2.0E-50	AF055066.1	NT	Homo sapiens MHC class 1 region
1063	10979	20823	4.6	2.0E-50	4557752	NT	Homo sapiens midline 1 (Opitz/BBB syndrome) (MID1) mRNA
1425	11330	21197	18.02	2.0E-50	AF138303.1	NT	Homo sapiens decorin D mRNA, complete cds, alternatively spliced
6924	16802	26995	6.27	2.0E-50	X06956.1	NT	Human HALPHA44 gene for alpha-tubulin, exons 1-3
6924	16802	26996	6.27	2.0E-50	X06956.1	NT	Human HALPHA44 gene for alpha-tubulin, exons 1-3
7686	17536	27761	1.53	2.0E-50	9910293	NT	Mus musculus keratin complex 2, gene 6g (Krt2-6g), mRNA
7686	17536	27762	1.53	2.0E-50	9910293	NT	Mus musculus keratin complex 2, gene 6g (Krt2-6g), mRNA
235	10204	20018	1	1.0E-50	BE007080.1	EST_HUMAN	PM3-BN0137-290300-002-g11 BN0137 Homo sapiens cDNA
235	10204	20019	1	1.0E-50	BE007080.1	EST_HUMAN	PM3-BN0137-290300-002-g11 BN0137 Homo sapiens cDNA
454	10398	20216	2.1	1.0E-50	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
2314	12195		8.98	1.0E-50	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
7375	17244	27450	1.22	9.0E-51	AA043738.1	EST_HUMAN	zk51c09.r1 Soares_pregnant_uterus_NhrPU Homo sapiens cDNA clone IMAGE:489352 5'
4487	14361	24151	4.89	8.0E-51	AA610842.1	EST_HUMAN	np98e09.s1 NCI_CGAP_Lu1 Homo sapiens cDNA clone IMAGE:1142440 3' similar to gb:X12671_ma1
6510	16369	26546	2.34	8.0E-51	11439587	NT	HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEIN A1 (HUMAN);
7448	17267		1.28	8.0E-51	AU138590.1	EST_HUMAN	Homo sapiens PDZ-73 protein (PDZ-73/NY-CO-38), mRNA
3245	13168	22967	1.36	7.0E-51	AW889219.1	EST_HUMAN	AU138590 PLACE1 Homo sapiens cDNA clone PLACE1008887 5'
3317	13238	23042	0.83	7.0E-51	AW274720.1	EST_HUMAN	QV4-NT0028-200400-180-d05 NT0028 Homo sapiens cDNA
4076	13978	23757	1.26	7.0E-51	AL079628.1	EST_HUMAN	xn34a03.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2685564 3' similar to TR:Q9Z340
4076	13978	23758	1.26	7.0E-51	AL079628.1	EST_HUMAN	Q9Z340 ATYPICAL PKC SPECIFIC BINDING PROTEIN. ;
4254	14153	23927	2.38	7.0E-51	AW295603.1	EST_HUMAN	DKFZp434B2229_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434B2229 5'
1936	11831	21714	5.3	6.0E-51	7657266	NT	DKFZp434B2229_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434B2229 5'
3428	13345	23150	12.92	6.0E-51	7657266	NT	UIH-BW0-alp-b-05-0-U1.s1 NCI_CGAP_Sub66 Homo sapiens cDNA clone IMAGE:2729817 3'
4212	14110	23887	0.78	6.0E-51	9910553	NT	Homo sapiens KIAA0929 protein Mx2 interacting nuclear target (MINT) homolog (KIAA0929), mRNA
4212	14110	23888	0.78	6.0E-51	9910553	NT	Homo sapiens KIAA0929 protein Mx2 interacting nuclear target (MINT) homolog (KIAA0929), mRNA
5845	15558	25657	2.26	6.0E-51	X01788.1	NT	Homo sapiens solute carrier family 2 (facilitated glucose transporter), member 9 (SLC2A9), mRNA
5650	15562	25656	6.68	6.0E-51	AF070083.1	NT	Homo sapiens solute carrier family 2 (facilitated glucose transporter), member 9 (SLC2A9), mRNA
5650	15562	25657	6.68	6.0E-51	AF070083.1	NT	Human lactoglobulin related (Hpr) gene exon 3
6158	15116	24859	2.16	6.0E-51	11429665	NT	Homo sapiens mitogen-activated protein kinase kinase 1 (MKK4) gene, exon 4
7553	17434	27649	2.26	6.0E-51	7661535	NT	Homo sapiens mitogen-activated protein kinase kinase 1 (MKK4) gene, exon 4
8550	18448	28716	1.72	6.0E-51	11526289	NT	Homo sapiens cerebral cell adhesion molecule (LOC51148), mRNA

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Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
774	10704	20543	10.92	5.0E-51	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
766	10715	20557	1.47	5.0E-51	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
975	12682	20745	1.37	5.0E-51	AL133204.1	NT	Novel human gene mapping to chromosome X
1550	11494	21354	0.84	5.0E-51	5031980	NT	Homo sapiens 26S proteasome-associated padf1 homolog (POH1) mRNA
2548	12422	22311	11.48	5.0E-51	AJ007558.1	NT	Homo sapiens mRNA for nucleoporin 155
3863	13774	23566	1.08	5.0E-51	M30938.1	NT	Human Ku (p70/p80) subunit mRNA, complete cds
3863	13774	23567	1.08	5.0E-51	M30938.1	NT	Human Ku (p70/p80) subunit mRNA, complete cds
5004	14879	24643	2.34	5.0E-51	AB037832.1	NT	Homo sapiens mRNA for KIAA1411 protein, partial cds
8601	18488	28739	3.72	5.0E-51	5803136	NT	Homo sapiens RNA binding motif protein 3 (RBM3), mRNA
130	10104	19926	0.92	3.0E-51	A1587348.1	EST_HUMAN	tr81c09.x1 NCL CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2224720 3' similar to gb:M26326
1159	11072	20917	4.16	3.0E-51	A1587348.1	EST_HUMAN	KERATIN, TYPE I CYTOSKELETAL 18 (HUMAN);
4232	14130	23906	2.13	3.0E-51	AL159142.1	NT	tr81c09.x1 NCL CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2224720 3' similar to gb:M26326
						NT	KERATIN, TYPE I CYTOSKELETAL 18 (HUMAN);
						NT	Novel human gene mapping to chromosome 22
6474	16333	26500	1.73	3.0E-51	R15914.1	EST_HUMAN	ya47c08.r1 Soares infant brain 1NIB Homo sapiens cDNA clone IMAGE:53233 5' similar to gb:M14123_cds4
7131	17008		5.97	3.0E-51	M29063.1	NT	RETROVIRUS-RELATED POL POLYPROTEIN (HUMAN); contains LTR5 repetitive element ;
9675	19233		1.58	3.0E-51	AF003528.1	NT	Human hnRNP C2 protein mRNA
362	10318	20139	1.81	2.0E-51	4507798	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
673	10607	20424	1.08	2.0E-51	BE391063.1	EST_HUMAN	Homo sapiens ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome) (UBE3A) mRNA
673	10607	20425	1.08	2.0E-51	BE391063.1	EST_HUMAN	601285694F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3607463 5'
1662	11564	21431	2.24	2.0E-51	AA233352.1	EST_HUMAN	601285694F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3607463 5'
3672	13586	23373	2.21	2.0E-51	A492415.1	EST_HUMAN	zr30a05.r1 Stralagene NT2 neuronal precursor 937230 Homo sapiens cDNA clone IMAGE:664880 5' similar to TR:G233226 G233226 RTVL-H PROTEIN. ; contains LTR7.3 LTR7 repetitive element ;
4392	14288	24071	1.02	2.0E-51	AW137826.1	EST_HUMAN	t127g03.x1 NCL CGAP_K1d11 Homo sapiens cDNA clone IMAGE:2131732 3'
5662	15573	25670	2.95	2.0E-51	BE782015.1	EST_HUMAN	U1H-B1+adj-d-02-0-JL.s1 NCL CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2716851 3'
7047	16924	27114	1.61	2.0E-51	BE901994.1	EST_HUMAN	601470448F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3873563 5'
7047	16924	27115	1.61	2.0E-51	BE901994.1	EST_HUMAN	601676787F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3959613 5'
						EST_HUMAN	601676787F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3959613 5'
7478	17348	27552	1.88	2.0E-51	A1917078.1	EST_HUMAN	ts74a07.x1 NCL CGAP_GC6 Homo sapiens cDNA clone IMAGE:2236980 3' similar to SW:TRKC_HUMAN
7639	17390	27600	5.25	2.0E-51	BE169980.1	EST_HUMAN	Q16288 NT-3 GROWTH FACTOR RECEPTOR PRECURSOR ;
						EST_HUMAN	MF3-HT0487-150200-113-g01 HT0487 Homo sapiens cDNA



Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7962	17812	28054	1.71	2.0E-51	AV682474.1	EST_HUMAN	AV682474 GKB Homo sapiens cDNA clone GKBAGF05 5'
8640	15259	25084	8.63	2.0E-51	A1732851.1	EST_HUMAN	cb34f09.x5 NCI_CGAP_Kid5 Homo sapiens cDNA clone IMAGE:1325609 3' similar to SW:NME1_MOUSE P35436 GLUTAMATE [NMDA] RECEPTOR SUBUNIT EPSILON 1 PRECURSOR ;
8640	15259	25085	8.63	2.0E-51	A1732851.1	EST_HUMAN	cb34f09.x5 NCI_CGAP_Kid5 Homo sapiens cDNA clone IMAGE:1325609 3' similar to SW:NME1_MOUSE P35436 GLUTAMATE [NMDA] RECEPTOR SUBUNIT EPSILON 1 PRECURSOR ;
9668	19227	25240	1.33	2.0E-51	11419159	NT	Homo sapiens myeloid/lymphoid or mixed-lineage leukemia (trithorax (Drosophila) homolog), translocated to, 4 (MLL T4), mRNA
109	10090	19905	4.4	1.0E-51	4503528	NT	Homo sapiens eukaryotic translation initiation factor 4A, isoform 1 (EIF4A1) mRNA
1478	11383		22.7	1.0E-51	AV742248.1	EST_HUMAN	AV742248 CB Homo sapiens cDNA clone CBFBC12 5'
4309	14206	23989	0.96	1.0E-51	4756071	NT	Homo sapiens small inducible cytokine subfamily A (Cys-Cys), member 15 (SCYA15) mRNA
4309	14206	23990	0.96	1.0E-51	4756071	NT	Homo sapiens small inducible cytokine subfamily A (Cys-Cys), member 15 (SCYA15) mRNA
5310	15231	25036	3.12	1.0E-51	T18862.1	EST_HUMAN	b120561 Testis 1 Homo sapiens cDNA clone b12056
8989	19771		3.57	1.0E-51	AV760590.1	EST_HUMAN	AV760590 MDS Homo sapiens cDNA clone MDSB802 5'
9454	19086		3.28	9.0E-52	AA777621.1	EST_HUMAN	z95a07.s1 Soares fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:448600 3' similar to contains THR.13 THR repetitive element ;
146	10120	19939	7.31	8.0E-52	AA720574.1	EST_HUMAN	nw21g02.s1 NCI_CGAP_GCB0 Homo sapiens cDNA clone IMAGE:1241138 3' similar to contains THR.13 THR repetitive element ;
1481	11386	21249	1.33	8.0E-52	X84900.1	NT	H. sapiens mRNA for laminin-5, alpha3b chain
1633	11537	21397	2.05	8.0E-52	11968028	NT	Homo sapiens hypothetical protein FLJ13556 similar to N-myc downstream regulated 3 (FLJ13556), mRNA
1633	11537	21398	2.05	8.0E-52	11968028	NT	Homo sapiens hypothetical protein FLJ13556 similar to N-myc downstream regulated 3 (FLJ13556), mRNA
3913	11537	21397	6.44	8.0E-52	11968028	NT	Homo sapiens hypothetical protein FLJ13556 similar to N-myc downstream regulated 3 (FLJ13556), mRNA
3913	11537	21398	6.44	8.0E-52	11968028	NT	Homo sapiens hypothetical protein FLJ13556 similar to N-myc downstream regulated 3 (FLJ13556), mRNA
7211	17088	27278	1.48	7.0E-52	W59471.1	EST_HUMAN	zc59a06.r1 Soares parathyroid_tumor_NbHPA Homo sapiens cDNA clone IMAGE:328578 5' similar to contains Alu repetitive element ;
1170	11082		0.86	6.0E-52	BE072409.1	EST_HUMAN	Q13-BT0537-271299-049-d07 BT0537 Homo sapiens cDNA
1668	11570	21436	2.25	6.0E-52	AF109907.1	NT	Homo sapiens S164 gene, partial cds; PS1 and hypothetical protein genes, complete cds; and S171 gene, partial cds
8540	18412	28678	2.23	6.0E-52	BE048172.1	EST_HUMAN	tz46h04.y1 NCI_CGAP_Brn52 Homo sapiens cDNA clone IMAGE:2281671 5' similar to SW:PGM_MOUSE_Q05793 BASEMENT MEMBRANE-SPECIFIC HEPARAN SULFATE PROTEOGLYCAN CORE PROTEIN PRECURSOR ;

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4340	14237	24021	2.07	5.0E-52	Z78898.1	NT	H.sapiens flow-sorted chromosome 6 HindIII fragment, SC6pA18H7
1639	11543	21402	0.93	4.0E-52	AF257318.1	NT	Homo sapiens SH3-containing protein SH3GLB1 mRNA, complete cds
1748	11648	21516	8.59	4.0E-52	4758843	NT	Homo sapiens nucleoporin 155kD (NUP155) mRNA
3850	13761	23554	0.82	4.0E-52	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
6886	16586	26760	1.24	4.0E-52	BE622032.1	EST_HUMAN	601440887F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3915836 5'
6965	16843	27035	7.25	4.0E-52	11417035	NT	Homo sapiens hydroxysteroid (17-beta) dehydrogenase 4 (HSD17B4), mRNA
9291	18992		4.25	4.0E-52	11418177	NT	Homo sapiens Ran GTPase activating protein 1 (RANGAP1), mRNA
9778	19293		5.09	4.0E-52	AB002059.1	NT	Homo sapiens DNA for Human P2XM, complete cds
4002	13908		9.98	3.0E-52	11437042	NT	Homo sapiens hypothetical protein FLJ10675 (FLJ10675), mRNA
550	10491	20299	1.39	2.0E-52	M10976.1	NT	Human endogenous retroviral DNA (4-1), complete retroviral segment
550	10491	20300	1.39	2.0E-52	M10976.1	NT	Human endogenous retroviral DNA (4-1), complete retroviral segment
2450	12327	22226	1.75	2.0E-52	BE207575.1	EST_HUMAN	bb66b07.y1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3030421 5' similar to gb.X16483 M.musculus mRNA for Zfp-1 zinc finger protein (MOUSE);
2706	12569		20.53	2.0E-52	BF677892.1	EST_HUMAN	602084710F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4248891 5'
4902	14782	24557	2.74	2.0E-52	AL137188.3	NT	Novel human gene mapping to chromosome 20, similar to membrane transporters
5497	15416	25479	2.74	2.0E-52	AW848041.1	EST_HUMAN	IL3-CT0214-231299-053-E12 CT0214 Homo sapiens cDNA
5841	15747	25860	1.49	2.0E-52	11141868	NT	Homo sapiens interleukin 21 receptor (IL21R), mRNA
7028	16905		8.39	2.0E-52	AF147880.1	NT	Macaca mulatta beta-tubulin mRNA, complete cds
7458	17267		1.98	2.0E-52	4758789	NT	Homo sapiens NADH dehydrogenase (ubiquinone) Fe-S protein 5 (15kD) (NADH-coenzyme Q reductase) (NDUFS5) mRNA
7825	17675	27918	4.53	2.0E-52	5730038	NT	Homo sapiens SET domain and mariner transposase fusion gene (SETMAR) mRNA
7825	17675	27919	4.53	2.0E-52	5730038	NT	Homo sapiens SET domain and mariner transposase fusion gene (SETMAR) mRNA
8536	18408	28671	5.33	2.0E-52	A1831462.1	EST_HUMAN	wj49c04.x1 NCI_CGAP_Lu19 Homo sapiens cDNA clone IMAGE:2406160 3' similar to contains THR.b2 THR repetitive element;
8536	18408	28672	5.33	2.0E-52	A1831462.1	EST_HUMAN	wj49c04.x1 NCI_CGAP_Lu19 Homo sapiens cDNA clone IMAGE:2406160 3' similar to contains THR.b2 THR repetitive element;
8547	18419	28689	3.09	2.0E-52	AV715377.1	EST_HUMAN	AV715377 DCB Homo sapiens cDNA clone DCBAIE03 5'
8659	18548		2.08	2.0E-52	W70260.1	EST_HUMAN	zd49g12.r1 Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:344038 5'
8891	18701		3.22	2.0E-52	11417990	NT	Homo sapiens LIM domain kinase 2 (LIMK2), mRNA
9101	19755	24894	8.86	2.0E-52	AW236297.1	EST_HUMAN	xn72e07.x1 NCI_CGAP_CML1 Homo sapiens cDNA clone IMAGE:2700036 3' similar to contains Alu repetitive element; contains element LTR2 repetitive element;
9496	19112		4.28	2.0E-52	A1808985.1	EST_HUMAN	wf67d05.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2360649 3' similar to TR:Q16859 Q16859 CARBOXYLESTERASE;
522	10464	20276	1.37	1.0E-52	AA634445.1	EST_HUMAN	zu75h12.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:743879 3'

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Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1349	11255	21111	8.25	1.0E-52	4504026	NT	Homo sapiens glutamate-aminonitrate ligase (glutamine synthase) (GLUL) mRNA
2489	12364		1.2	1.0E-52	4502238	NT	Homo sapiens arylsulfatase D (ARSD), transcript variant 1, mRNA
3021	12949	22741	1.41	1.0E-52	S61070.1	NT	pol=reverse transcriptase homolog (retroviral element) [human, endogenous retroviral element RTVL-Hp1, Genomic, 660 nt]
5270	15192	24967	3.59	1.0E-52	M29426.1	NT	Human P-glycoprotein (MDR1) gene, exon 4
5851	15757	25875	2.11	1.0E-52	U38934.1	NT	Human PMS2 related (hPMSR2) gene, complete cds
6394	16256	26417	3.19	1.0E-52	X07292.1	NT	Human aldolase C gene for fructose-1,6-bisphosphate aldolase
6932	16810		1.64	1.0E-52	AL163227.2	NT	Homo sapiens chromosome 21 segment HS21C027
8023	17873		1.61	1.0E-52	AL163202.2	NT	Homo sapiens chromosome 21 segment HS21C027
8147	18035	28283	1.84	1.0E-52	U48296.1	NT	Homo sapiens chromosome 21 segment HS21C027
8210	18094		2.04	1.0E-52	11426321	NT	Homo sapiens protein tyrosine phosphatase PTPCAAX1 (hPTPCAAX1) mRNA, complete cds
3723	13635	23420	1.03	9.0E-53	4506064	NT	Homo sapiens proteasome (prosome, macropain) subunit, beta type, 2 (PSMB2), mRNA
4293	14191	23975	1.01	9.0E-53	AF001446.1	NT	Homo sapiens protein kinase, cAMP-dependent, regulatory, type II, beta (PRKAR2B) mRNA
4966	14841	24811	0.93	9.0E-53	7661713	NT	Homo sapiens core binding factor alpha1 subunit (CBFA1) gene, exon 3
9338	19016		2.06	7.0E-53	BF238465.1	EST_HUMAN	Homo sapiens predicted osteoblast protein (GS3786), mRNA
9752	19632		2.98	7.0E-53	AI421782.1	EST_HUMAN	601904771F1 NIH_MGC_54 Homo sapiens cDNA clone IMAGE:4132793 5'
4009	13915	23690	2.2	5.0E-53	4758543	NT	THR repetitive element ;
9389	19048		1.72	5.0E-53	AW813563.1	EST_HUMAN	Homo sapiens heterogeneous nuclear ribonucleoprotein C (C1/C2) (HNRPC) mRNA
43	10031	19834	1.92	4.0E-53	AL163285.2	NT	RC3-ST0197-151099-011-g10 ST0197 Homo sapiens cDNA
43	10031	19835	1.92	4.0E-53	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
4715	14601	24387	1.09	4.0E-53	7705414	NT	Homo sapiens chromosome 21 segment HS21C085
8545	18417	28685	3.33	4.0E-53	BF128701.1	EST_HUMAN	Homo sapiens hock1 protein (HOCK1), mRNA
8545	18417	28686	3.33	4.0E-53	BF128701.1	EST_HUMAN	601810969F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4053977 5'
2625	12493	22384	2.59	3.0E-53	AB026998.1	NT	601810969F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4053977 5'
3670	13584	23371	1.29	3.0E-53	AW050836.1	EST_HUMAN	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
4486	14380	24167	1.18	3.0E-53	AW803563.1	EST_HUMAN	w222607.x1 Soares_Dieckgraeffe_colon_NHCD Homo sapiens cDNA clone IMAGE:2558796 3'
4833	14715	24498	0.85	3.0E-53	BE069344.1	EST_HUMAN	IL2-UM0081-240300-055-D03 UM0081 Homo sapiens cDNA
6833	16712	26905	9.88	3.0E-53	S72043.1	NT	QV3-BT0381-270100-073-d06 BT0381 Homo sapiens cDNA
7238	17115		8.59	3.0E-53	5901953	NT	GIF=growth inhibitory factor [human, brain, Genomic, 2015 nt]
450	10394		4.25	2.0E-53	AA366556.1	EST_HUMAN	Homo sapiens EGFR1 oncogene partner (FOP), mRNA
2279	12163	22060	2.98	2.0E-53	U78027.1	NT	EST177525 Pancreas tumor III Homo sapiens cDNA 5' end
							Homo sapiens Bruton's tyrosine kinase (BTK), alpha-D-galactosidase A (GLA), L44-like ribosomal protein (L44L) and FTP3 (FTP3) genes, complete cds

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2490	12365		10.54	2.0E-53	4502316	NT	Homo sapiens ATPase, H <sup>+</sup> transporting, lysosomal (vacuolar proton pump) 31kD; Vacuolar proton-ATPase, subunit E; V-ATPase, subunit E (ATP6E), mRNA
2694	12559	22446	6.93	2.0E-53	4757915	NT	Homo sapiens core-binding factor, runt domain, alpha subunit 2; translocated to, 1; cyclin D-related (CBFA2T1) mRNA
2694	12559	22447	6.93	2.0E-53	4757915	NT	(CBFA2T1) mRNA
3207	13131	22933	1.18	2.0E-53	AF083822.1	NT	Homo sapiens dihydropyridine receptor alpha 2 subunit (CACNA2D1) gene, exon 6
3970	13877	23653	2.06	2.0E-53	M61873.1	NT	Human Krueppel-related DNA-binding protein (TF34) gene, partial cds
4390	14286	24068	1.07	2.0E-53	4508962	NT	Homo sapiens SKAP55 homologue (SKAP-HOM) mRNA
5091	14981	24735	1.12	2.0E-53	AL163281.2	NT	Homo sapiens chromosome 21 segment HS21C081
5091	14961	24736	1.12	2.0E-53	AL163281.2	NT	Homo sapiens chromosome 21 segment HS21C081
5331	15251	25056	3.11	2.0E-53	BF334740.1	EST_HUMAN	PM1-CT0396-170800-001-g03 CT0396 Homo sapiens cDNA
5331	15251	25057	3.11	2.0E-53	BF334740.1	EST_HUMAN	PM1-CT0396-170800-001-g03 CT0396 Homo sapiens cDNA
7413	17280		5.6	2.0E-53	AW245676.1	EST_HUMAN	2822665.5prime NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2822665 5'
1429	11334	21200	0.9	1.0E-53	AJ271736.1	NT	Homo sapiens Xq pseudautosomal region; segment 2/2
3364	13283	23083	1	1.0E-53	AB028898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
6021	15925	28056	1.42	1.0E-53	BF364201.1	EST_HUMAN	CM4-NN1029-150800-543-e02 NN1029 Homo sapiens cDNA
7252	17129	27322	5.14	1.0E-53	X79536.1	NT	H. sapiens mRNA for hnRNP core protein A1
5152	15019	24787	0.8	9.0E-54	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
5152	15019	24788	0.8	9.0E-54	4507500	NT	Homo sapiens T-cell lymphoma invasion and metastasis 1 (TIAM1) mRNA
5244	19439	24939	4.71	9.0E-54	4506786	NT	Homo sapiens IQ motif containing GTPase activating protein 1 (IQGAP1) mRNA
200	10172	19988	3.09	8.0E-54	BE386785.1	EST_HUMAN	601272863F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3814031 5'
1794	11692	21568	1.33	8.0E-54	4504610	NT	Homo sapiens insulin-like growth factor 2 receptor (IGF2R) mRNA
4629	14517	24307	1.25	8.0E-54	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
4629	14517	24308	1.25	8.0E-54	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
5030	14517	24307	1.08	8.0E-54	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
5030	14517	24308	1.08	8.0E-54	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
5614	15529	25612	20.81	8.0E-54	6005700	NT	Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 8 (ABCA8), mRNA
379	10363	20186	1.26	7.0E-54	AA812537.1	EST_HUMAN	at79c12.s1 Scores_testis_NHT Homo sapiens cDNA clone 1377046 3' similar to contains MER30.13 MER30 repetitive element;
1789	11697	21563	1.54	7.0E-54	Y16945.1	NT	Homo sapiens mRNA for monocyte chemotactic protein-2
2158	12045	21945	4.61	7.0E-54	N27177.1	EST_HUMAN	yw68d12.s1 Scores_placenta_8to9weeks_2NblHP8to9W Homo sapiens cDNA clone IMAGE:257399 3' similar to contains LTR7.b3 LTR7 repetitive element;

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Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7831	17681	27925	2.23	7.0E-54	11417222	NT	Homo sapiens similar to nuclear factor related to kappa B binding protein (H. sapiens) (LOC63182), mRNA
8611	18478		6.24	7.0E-54	AI160189.1	EST_HUMAN	qb67g03.x1 Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:1705204 3' similar to contains OFR.11 OFR repetitive element;
22	10009	19802	1.54	6.0E-54	AB003618.1	NT	Homo sapiens DNA for MICB, exon 4, 5 and partial cds
1833	11730	21605	0.87	6.0E-54	4505052	NT	Homo sapiens lymphocyte antigen 75 (L.Y75) mRNA, and translated products
1833	11730	21606	0.87	6.0E-54	4505052	NT	Homo sapiens lymphocyte antigen 75 (L.Y75) mRNA, and translated products
3246	13169	22968	0.84	6.0E-54	8922148	NT	Homo sapiens hypothetical protein DKFZp434M035 (DKFZp434M035), mRNA
3923	13832	23612	2.4	6.0E-54	4502872	NT	Homo sapiens chloride channel 6 (CLCN6) mRNA
4359	14255	24040	1.24	6.0E-54	AV754746.1	EST_HUMAN	AV754746 TP Homo sapiens cDNA clone TPGAAC10 5'
4774	14658		1.71	6.0E-54	Y09846.1	NT	H. sapiens shc pseudogene, p66 isoform
4930	14658		1.3	6.0E-54	Y09846.1	NT	H. sapiens shc pseudogene, p66 isoform
8750	17899	28143	1.77	6.0E-54	AW813567.1	EST_HUMAN	RC3-ST0197-151099-011-108 ST0197 Homo sapiens cDNA
2104	11993	21893	2.25	5.0E-54	P51523	SWISSPROT	ZINC FINGER PROTEIN 84 (ZINC FINGER PROTEIN HPF2)
176	10147		106.86	4.0E-54	AF110103.1	NT	Tupaia belangeri beta-actin mRNA, partial cds
940	10865	20712	41.94	4.0E-54	AA308764.1	EST_HUMAN	EST1177696 Jurkat T-cells VI Homo sapiens cDNA 5' end similar to glyceraldehyde-3-phosphate dehydrogenase
1764	11663	21536	3.24	4.0E-54	D38521.1	NT	Human mRNA for KIAA0077 gene, partial cds
1764	11663	21537	3.24	4.0E-54	D38521.1	NT	Human mRNA for KIAA0077 gene, partial cds
3168	13093		1.17	4.0E-54	AI935086.1	EST_HUMAN	wc26d11.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2329269 3' similar to TR:O02711
88	10072	19888	5.11	3.0E-54	AA313487.1	EST_HUMAN	EST185371 Colon carcinoma (HCC) cell line Homo sapiens cDNA 5' end
2522	12386	22287	0.92	3.0E-54	AL110383.1	EST_HUMAN	DKFZp434E0731_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434E0731 5'
2583	12454		0.88	3.0E-54	AI608757.1	EST_HUMAN	IL-BT189-190399-007 BT189 Homo sapiens cDNA
5598	15512	25590	1.48	3.0E-54	4502434	NT	Homo sapiens BMX non-receptor tyrosine kinase (BMX) mRNA
6373	16235	26394	1.88	3.0E-54	AA844061.1	EST_HUMAN	ai92c08.s1 Soares_parathyroid_tumor_NbHPA Homo sapiens cDNA clone IMAGE:1388270 3'
6373	16235	26395	1.88	3.0E-54	AA844061.1	EST_HUMAN	ai92c08.s1 Soares_parathyroid_tumor_NbHPA Homo sapiens cDNA clone IMAGE:1388270 3'
8435	18309	28565	4.17	3.0E-54	BF345600.1	EST_HUMAN	602019408F1 NCI_CGAP_Bn67 Homo sapiens cDNA clone IMAGE:4155121 5'
8675	18563	28847	3.34	3.0E-54	AA393362.1	EST_HUMAN	z7f012.1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:72727 5' similar to TR:G191315
9199	18932	26353	2.86	3.0E-54	AW954559.1	EST_HUMAN	G191315 ANDROGEN-DEPENDENT EXPRESSED PROTEIN, ;
9242	19714		7	3.0E-54	AW748965.1	EST_HUMAN	EST366629 MAGC resequences, MAGC Homo sapiens cDNA
626	10563	20374	6.29	2.0E-54	5031900	NT	RC1-BT0313-131199-011-b09 BT0313 Homo sapiens cDNA
1342	11248	21105	1.94	2.0E-54	4507164	NT	Homo sapiens killer cell lectin-like receptor subfamily G, member 1 (KLRG1), mRNA
							Homo sapiens nuclear antigen Sp100 (SP100) mRNA

Table 4

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1529	11434	21290	1.6	2.0E-54	AA655008.1	EST_HUMAN	nt78a09.s1 NCL_CGAP_P13 Homo sapiens cDNA clone IMAGE:1204600 similar to contains element L1 repetitive element;
2493	12367	22261	1.3	2.0E-54	AW163175.1	EST_HUMAN	au92g03.y1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2783764 5' similar to SW:CUL1_HUMAN Q19616 CULLIN HOMOLOG 1;
2556	12428	22321	1.82	2.0E-54	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
2865	12793	22587	1.65	2.0E-54	AW057524.1	EST_HUMAN	wy60b12.x1 Soares NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:2552927 3' similar to TR:Q62084 Q62084 PHOSPHOLIPASE C NEIGHBORING ;
3501	13418		4.06	2.0E-54	AA532925.1	EST_HUMAN	rt45g09.s1 NCL_CGAP_P19 Homo sapiens cDNA clone IMAGE:995488 similar to gb:X53777 60S RIBOSOMAL PROTEIN L23 (HUMAN);
4110	14010		2.03	2.0E-54	4502642	NT	Homo sapiens chaperonin containing T-complex subunit 6 (CCT6) mRNA
4343	14240		1.13	2.0E-54	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
4780	14664	24450	1.45	2.0E-54	7706446	NT	Homo sapiens peptidylarginine deiminase type III (LOC51702), mRNA
5156	15023	24790	0.84	2.0E-54	AF083823.1	NT	Homo sapiens dihydropyridine receptor alpha 2 subunit (CACNA2D1) gene, exon 7
5363	15283	25116	3.75	2.0E-54	4759069	NT	Homo sapiens small inducible cytokine subfamily A (Cys-Cys), member 14 (SCYA14) mRNA
5440	15390	25417	1.34	2.0E-54	BE047864.1	EST_HUMAN	tz43c11.y1 NCL_CGAP_Brn52 Homo sapiens cDNA clone IMAGE:2291348 5'
5521	15439	25503	3.59	2.0E-54	11426657	NT	Homo sapiens KIAA0100 gene product (KIAA0100), mRNA
5573	15498	25564	18.19	2.0E-54	AB046811.1	NT	Homo sapiens mRNA for KIAA1591 protein, partial cds
5573	15498	25565	18.19	2.0E-54	AB046811.1	NT	Homo sapiens mRNA for KIAA1591 protein, partial cds
6227	16093	26243	8.14	2.0E-54	11426544	NT	Homo sapiens neurofibromin 1 (neurofibromatosis, von Recklinghausen disease, Watson disease) (NF1), mRNA
7552	17403	27617	3.62	2.0E-54	AB001025.1	NT	Homo sapiens mRNA for brain tyrosine receptor, complete cds
7749	17599	27821	1.26	2.0E-54	11429127	NT	Homo sapiens Janus Kinase 2 (a protein tyrosine kinase) (JAK2), mRNA
8963	18770		2.57	2.0E-54	7657454	NT	Homo sapiens pascadillo (zebrafish) homolog 1, containing BRCT domain (PES1), mRNA
9653	19244	25216	1.46	2.0E-54	8567387	NT	Homo sapiens period (Drosophila) homolog 3 (PER3), mRNA
4363	14299		1.07	1.0E-54	BF315418.1	EST_HUMAN	601899230F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4128535 5'
9852	19345		2.26	1.0E-54	AJ077341.1	EST_HUMAN	AU077341 Sugano cDNA library Homo sapiens cDNA clone Zn6C880 similar to 5'-end region of Human gamma-glutamyl transpeptidase mRNA, 5' end
1294	11201		14.56	8.0E-55	Y07829.2	NT	Homo sapiens RFB30 gene for RING finger protein
1297	11204		2.32	8.0E-55	Y07829.2	NT	Homo sapiens RFB30 gene for RING finger protein
8530	18402		2.76	8.0E-55	AW409714.1	EST_HUMAN	fh02a02.x1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:2960907 5'
1065	10981	20826	1.19	7.0E-55	R09346.1	EST_HUMAN	yf26e04.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:127998 5' similar to SP:C561_BOVIN P10897 CYTOCHROME ;
7297	17173	27373	1.26	7.0E-55	AA89581.1	EST_HUMAN	ak28a11.s1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:1407260 3'
7315	17191	27393	1.59	7.0E-55	AU139909.1	EST_HUMAN	AU139909 PLACE1 Homo sapiens cDNA clone PLACE1011576 5'

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8541	18413	28679	12.75	7.0E-55	AI561056.1	EST_HUMAN	tq29f09.x1 NCI_CGAP_U1 Homo sapiens cDNA clone IMAGE:2210249 3'
8541	18413	28680	12.75	7.0E-55	AI561056.1	EST_HUMAN	tq29f09.x1 NCI_CGAP_U1 Homo sapiens cDNA clone IMAGE:2210249 3'
9823	19648		4.3	7.0E-55	H23396.1	EST_HUMAN	ym57g07.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:52444 5'
8803	18617	28808	1.98	6.0E-55	AB040934.1	NT	Homo sapiens mRNA for KIAA1501 protein, partial cds
1732	11633	21500	1.12	5.0E-55	AA704971.1	EST_HUMAN	z95b09.s1 Soares fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:462617 3'
1732	11633	21501	1.12	5.0E-55	AA704971.1	EST_HUMAN	z95b09.s1 Soares fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:462617 3'
5941	15846	25969	1.82	5.0E-55	4502240	NT	Homo sapiens arylsulfatase E (chondrodysplasia punctata 1) (ARSE), mRNA
5941	15846	25970	1.82	5.0E-55	4502240	NT	Homo sapiens arylsulfatase E (chondrodysplasia punctata 1) (ARSE), mRNA
7229	17106	27296	2.06	5.0E-55	4506302	NT	Homo sapiens protein tyrosine phosphatase, receptor type, alpha polypeptide (PTPRA) mRNA
7770	17620	27851	1.86	5.0E-55	AB014511.1	NT	Homo sapiens mRNA for KIAA0611 protein, partial cds
7770	17620	27852	1.86	5.0E-55	AB014511.1	NT	Homo sapiens mRNA for KIAA0611 protein, partial cds
7869	17719	27965	1.19	5.0E-55	5453765	NT	Homo sapiens nel (chicken)-like 2 (NELL2), mRNA
9283	18985		2.13	5.0E-55	11417972	NT	Homo sapiens pescadillo (zebrafish) homolog 1, containing BRCT domain (PES1), mRNA
49	12638	19843	1.36	4.0E-55	AW967994.1	EST_HUMAN	EST370064 MAGE resequences, MAGE Homo sapiens cDNA
656	10591	20409	33.95	4.0E-55	4828973	NT	Homo sapiens RNA binding motif protein, Y chromosome, family 1, member A1 (RBM1A1) mRNA
1422	11328	21193	1.89	4.0E-55	7661713	NT	Homo sapiens predicted osteoblast protein (GS3786), mRNA
1422	11328	21194	1.89	4.0E-55	7661713	NT	Homo sapiens predicted osteoblast protein (GS3786), mRNA
1498	11402		1.26	4.0E-55	BF061411.1	EST_HUMAN	7f52b10.x1 Soares NSF_F8_9W_OT_PA_P_S1 Homo sapiens cDNA clone IMAGE:3390043 3' similar to contains L1.13 L1 repetitive element ;
1979	11872	21763	1.53	4.0E-55	4506180	NT	Homo sapiens proteasome (prosome, macropain) subunit, alpha type, 2 (PSMA2) mRNA
1979	11872	21764	1.53	4.0E-55	4506180	NT	Homo sapiens proteasome (prosome, macropain) subunit, alpha type, 2 (PSMA2) mRNA
2039	11930	21824	7.73	4.0E-55	4503314	NT	Homo sapiens diacylglycerol kinase, gamma (90kD) (DGKG) mRNA
2039	11930	21825	7.73	4.0E-55	4503314	NT	Homo sapiens diacylglycerol kinase, gamma (90kD) (DGKG) mRNA
2262	12146	22046	1.25	4.0E-55	4507794	NT	Homo sapiens ubiquitin-conjugating enzyme E2 variant 1 (UBE2V1) mRNA
2545	12419		1.04	4.0E-55	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
3242	13165	22964	1.38	4.0E-55	AL163300.2	NT	Homo sapiens chromosome 21 segment HS21C100
6857	16736		6.44	4.0E-55	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
8559	18429		4.46	4.0E-55	W28189.1	EST_HUMAN	43c5 Human retina cDNA randomly primed sublibrary Homo sapiens cDNA
9200	18933		2.38	4.0E-55	BF303941.1	EST_HUMAN	601886575F2 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4120338 5'
9138	18894		2.76	3.0E-55	BE176519.1	EST_HUMAN	PM1-HT0603-090300-001-g08 HT0603 Homo sapiens cDNA
9866	19356		1.65	3.0E-55	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
373	10327	20150	2.3	2.0E-55	X57147.1	NT	Human endogenous retrovirus pHE.1 (ERV9)
539	10490		0.89	2.0E-55	M10976.1	NT	Human endogenous retroviral DNA (4-1), complete retroviral segment
633	10570	20383	3.08	2.0E-55	4507296	NT	Homo sapiens syntaxin-binding protein 1 (STXBP1) mRNA, and translated products

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2928	12855	22656	0.79	2.0E-55	4507798	NT	Homo sapiens ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome) (UBE3A) mRNA
4665	14551	24342	2.97	2.0E-55	BE719986.1	EST_HUMAN	CM1-IT0876-150800-357-g03 HT0876 Homo sapiens cDNA
7284	17160		4.3	2.0E-55	A1002836.1	EST_HUMAN	am8h05.s1 Stragene schizo brain S11 Homo sapiens cDNA clone IMAGE:1684185 3' similar to contains THR.b2 THR repetitive element;
8319	18196	28446	2.2	2.0E-55	AU119344.1	EST_HUMAN	AU119344 HEMBA1 Homo sapiens cDNA clone HEMBA1005583 5'
91	10075	19891	1.6	1.0E-55	4505060	NT	Homo sapiens mannose-6-phosphate receptor (cation dependent) (M6PR) mRNA
182	10154	19969	11.9	1.0E-55	U09823.1	NT	Oryctolagus cuniculus New Zealand white elongation factor 1 alpha (Rabefla2) mRNA, complete cds
1132	11046	20888	3.55	1.0E-55	AB020710.1	NT	Homo sapiens mRNA for KIAA0903 protein, partial cds
1907	11802	21680	0.86	1.0E-55	BE277861.1	EST_HUMAN	601120116F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:2967027 5'
1907	11802	21681	0.86	1.0E-55	BE277861.1	EST_HUMAN	601120116F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:2967027 5'
2277	12161		2.3	1.0E-55	5803174	NT	Homo sapiens SMA3 (SMA3), mRNA
2290	12651	22071	1.03	1.0E-55	AF000990.1	NT	Homo sapiens testis-specific Testis Transcript Y 1 (TTY1) mRNA, partial cds
2470	12346	22238	33.19	1.0E-55	X13111.1	NT	Human mRNA for HLA-A11E, a MHC class I molecule (major histocompatibility complex)
2507	12381	22272	4.71	1.0E-55	AB007866.2	NT	Homo sapiens mRNA for KIAA0408 protein, partial cds
2507	12381	22272	4.71	1.0E-55	AB007866.2	NT	Homo sapiens mRNA for KIAA0408 protein, partial cds
2568	12439	22331	1.35	1.0E-55	L54057.1	NT	Homo sapiens CLP mRNA, partial cds
3363	13282	23082	1.15	1.0E-55	W28189.1	EST_HUMAN	43c5 Human retina cDNA randomly primed sublibrary Homo sapiens cDNA
3907	13817	23597	3.47	1.0E-55	AL163287.2	NT	Homo sapiens chromosome 21 segment HS21C067
4197	14097	23878	1.04	1.0E-55	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
4721	14607	24392	0.98	1.0E-55	AB037163.1	NT	Homo sapiens DSCR5b mRNA, complete cds
4721	14607	24393	0.98	1.0E-55	AB037163.1	NT	Homo sapiens DSCR5b mRNA, complete cds
5081	14951	24727	1.19	1.0E-55	8923125	NT	Homo sapiens hypothetical protein FLJ20126 (FLJ20126), mRNA
5794	15700	25809	5.75	1.0E-55	11433046	NT	Homo sapiens hect domain and RLD 2 (HERC2), mRNA
5794	15700	25810	5.75	1.0E-55	11433046	NT	Homo sapiens hect domain and RLD 2 (HERC2), mRNA
8284	18163	28405	4.74	1.0E-55	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
8284	18163	28406	4.74	1.0E-55	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
8745	17894	28138	2.58	1.0E-55	U50950.1	NT	Human infant brain unknown product mRNA, complete cds
8859	18671	28959	2.04	1.0E-55	10567821	NT	Homo sapiens DNA-binding protein (LOC56242), mRNA
6368	16221	26383	1.81	9.0E-56	BE379074.1	EST_HUMAN	601237702F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3609552 5'
2703	12567	22457	5.18	7.0E-56	H19934.1	EST_HUMAN	yr62g03.r1 Soares adult brain N2b5HB55Y Homo sapiens cDNA clone IMAGE:173044 5' similar to contains THR repetitive element;
6504	16363	26538	1.84	7.0E-56	AW361213.1	EST_HUMAN	RC1-CT0252-231099-013-607 CT0252 Homo sapiens cDNA



Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6504	16363	26539	1.84	7.0E-56	AW361213.1	EST_HUMAN	RC1-CT0252-231099-013-b07 CT0252 Homo sapiens cDNA
1666	11568	21434	2.26	5.0E-56	AW997712.1	EST_HUMAN	RC3-BN0053-170200-011-h01 BN0053 Homo sapiens cDNA
7940	17790		1.31	5.0E-56	W28189.1	EST_HUMAN	43c5 Human retina cDNA randomly primed sublibrary Homo sapiens cDNA
9375	19701	24902	2.88	5.0E-56	H55099.1	EST_HUMAN	CHR220038 Chromosome 22 exon Homo sapiens cDNA clone C22_55 5'
25	10012	19805	6.15	4.0E-56	AF141349.1	NT	Homo sapiens beta-tubulin mRNA, complete cds
25	10012	19806	6.15	4.0E-56	AF141349.1	NT	Homo sapiens beta-tubulin mRNA, complete cds
2676	12541	22431	4.11	4.0E-56	4507728	NT	Homo sapiens tubulin, beta polypeptide (TUBB) mRNA
2676	12541	22432	4.11	4.0E-56	4507728	NT	Homo sapiens tubulin, beta polypeptide (TUBB) mRNA
2781	10457	20268	3.05	4.0E-56	AF003528.1	NT	Homo sapiens X-linked anhidrotic ectodermal dysplasia protein gene (EDA), exon 2 and flanking repeat regions
5788	15694	25802	6.29	4.0E-56	AF217508.1	NT	Homo sapiens uncharacterized bone marrow protein BM031 mRNA, complete cds
5788	15694	25803	6.29	4.0E-56	AF217508.1	NT	Homo sapiens uncharacterized bone marrow protein BM031 mRNA, complete cds
7999	17849	28090	1.23	4.0E-56	AF043349.1	NT	Homo sapiens lymphocyte-specific protein 1 (LSP1) gene, LSP1-7 allele, partial cds
8295	18174	28417	8.75	4.0E-56	AI498066.1	EST_HUMAN	tm65g12.x1 NCL CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2163046 3'
8295	18174	28418	8.75	4.0E-56	AI498066.1	EST_HUMAN	tm65g12.x1 NCL CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2163046 3'
1318	11225	21081	9.85	3.0E-56	8924029	NT	Homo sapiens hypothetical protein PRO1304 (PRO1304), mRNA
2103	11992	21892	2.7	3.0E-56	6912697	NT	Homo sapiens oncogene TC21 (TC21), mRNA
3086	13013	22804	1.58	3.0E-56	AA325826.1	EST_HUMAN	EST28889 Cerebellum II Homo sapiens cDNA 5' end
3086	13013	22805	1.58	3.0E-56	AA325826.1	EST_HUMAN	EST28889 Cerebellum II Homo sapiens cDNA 5' end
3761	13674		1.39	3.0E-56	AF055066.1	NT	Homo sapiens MHC class 1 region
4327	14224	24006	4.05	3.0E-56	AL163288.2	NT	Homo sapiens chromosome 21 segment HS21C068
4470	14364	24154	2.14	3.0E-56	5902085	NT	Homo sapiens superkiller viral/cidic activity 2 (S. cerevisiae homolog)-like (SKIV2L), mRNA
5486	15405	25467	1.57	3.0E-56	4759163	NT	Homo sapiens sparc/osteonectin, ovcv and kazal-like domains proteoglycan (testican) (SPOCK) mRNA
5486	15405	25468	1.57	3.0E-56	4759163	NT	Homo sapiens sparc/osteonectin, ovcv and kazal-like domains proteoglycan (testican) (SPOCK) mRNA
6109	16003	26141	6.34	3.0E-56	11421124	NT	Homo sapiens lysosomal-associated membrane protein 2 (LAMP2), mRNA
7117	16994	27185	5.74	3.0E-56	11418704	NT	Homo sapiens bone morphogenetic protein 5 (BMP5), mRNA
7987	17837	28078	1.52	3.0E-56	11434956	NT	Homo sapiens KIAA0317 gene product (KIAA0317), mRNA
8124	18012	28259	10.72	3.0E-56	AB042556.1	NT	Homo sapiens mRNA, similar to rat myomegalin, complete cds
8632	18497	28771	3.89	3.0E-56	5902013	NT	Homo sapiens nuclear pore complex interacting protein (NPIP), mRNA
8632	18497	28772	3.89	3.0E-56	5902013	NT	Homo sapiens nuclear pore complex interacting protein (NPIP), mRNA
9240	18955	28315	2.3	3.0E-56	11434876	NT	Homo sapiens caveolin 3 (CAV3), mRNA
9240	18955	28316	2.3	3.0E-56	11434876	NT	Homo sapiens caveolin 3 (CAV3), mRNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
513	10455		2.94	2.0E-56	AA199818.1	EST_HUMAN	zq52a08.s1 Stratiogene neuroepithelium (#937231) Homo sapiens cDNA clone IMAGE:645206 3'
716	12675	20476	1.79	2.0E-56	BE064386.1	EST_HUMAN	RC4-BT0310-110300-015-f10 BT0310 Homo sapiens cDNA
716	12675	20477	1.19	2.0E-56	BE064386.1	EST_HUMAN	RC4-BT0310-110300-015-f10 BT0310 Homo sapiens cDNA
2334	12215	22113	1.02	2.0E-56	M26061.1	NT	Human cGMP phosphodiesterase alpha subunit (CGPR-A) mRNA, complete cds
2334	12215	22114	1.02	2.0E-56	M26061.1	NT	Human cGMP phosphodiesterase alpha subunit (CGPR-A) mRNA, complete cds
2959	12886	22684	0.93	2.0E-56	AB037835.1	NT	Homo sapiens mRNA for KIAA1414 protein, partial cds
3489	13405	23210	1.08	2.0E-56	AV703184.1	EST_HUMAN	AV703184 ADB Homo sapiens cDNA clone ADBCFG10 5'
964	10887		1.44	1.0E-56	AF190930.1	NT	Macaca fascicularis protein tyrosine phosphatase (PRL-1) mRNA, complete cds
3622	13536	23321	1.79	1.0E-56	AW589833.1	EST_HUMAN	hg23c11.x1 NCI_CGAP_G06 Homo sapiens cDNA clone IMAGE:2946452 3'
3622	13536	23322	1.79	1.0E-56	AW589833.1	EST_HUMAN	hg23c11.x1 NCI_CGAP_G06 Homo sapiens cDNA clone IMAGE:2946452 3'
4963	14838	24606	1.52	1.0E-56	AI905162.1	EST_HUMAN	QV-BT077-130199-079 BT077 Homo sapiens cDNA
7780	17630	27863	1.86	1.0E-56	AW845987.1	EST_HUMAN	RC2-CT0163-220999-001-E02 CT0163 Homo sapiens cDNA
609	10545		1.97	9.0E-57	AW880885.1	EST_HUMAN	QV0-CT0033-070300-152-H03 OT0033 Homo sapiens cDNA
4109	14009	23786	1.17	9.0E-57	4758279	NT	Homo sapiens EphA4 (EPHA4) mRNA
4109	14009	23787	1.17	9.0E-57	4758279	NT	Homo sapiens EphA4 (EPHA4) mRNA
13	9999	19790	1.55	8.0E-57	8923349	NT	Homo sapiens hypothetical protein FLJ20371 (FLJ20371), mRNA
294	10268	20079	2.91	8.0E-57	AW816405.1	EST_HUMAN	QV4-ST0234-181199-037-f05 ST0234 Homo sapiens cDNA
866	10792	20642	5.79	8.0E-57	AW264599.1	EST_HUMAN	xr05d10.x1 NCI_CGAP_Brn53 Homo sapiens cDNA clone IMAGE:2759251 3' similar to gb.U05875
1774	11673	21551	1.63	8.0E-57	AA406109.1	EST_HUMAN	INTERFERON-GAMMA RECEPTOR BETA CHAIN PRECURSOR (HUMAN);
3335	13255	23060	1.02	8.0E-57	4758279	NT	zr61b12.1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:757151 5'
3335	13255	23061	1.02	8.0E-57	4758279	NT	Homo sapiens EphA4 (EPHA4) mRNA
5107	14975	24750	0.96	8.0E-57	AA971001.1	EST_HUMAN	Homo sapiens EphA4 (EPHA4) mRNA
5207	19624	25004	6.35	8.0E-57	11418185	EST_HUMAN	op67h02.s1 Soares NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1581939 3'
5888	15794	25915	11.76	8.0E-57	AB023177.1	NT	Homo sapiens aconitase 2, mitochondrial (ACO2), mRNA
5888	15794	25916	11.76	8.0E-57	AB023177.1	NT	Homo sapiens mRNA for KIAA0960 protein, partial cds
6557	16415	26594	67.76	8.0E-57	AB020644.1	NT	Homo sapiens mRNA for KIAA0960 protein, partial cds
6557	16415	26595	67.76	8.0E-57	AB020644.1	NT	Homo sapiens mRNA for KIAA0837 protein, partial cds
8771	9999	19790	3.32	8.0E-57	8923349	NT	Homo sapiens hypothetical protein FLJ20371 (FLJ20371), mRNA
9468	19097		1.27	8.0E-57	7019528	NT	Homo sapiens monocarboxylate transporter 3 (SLC16A8), mRNA
9607	19188	25251	2.02	8.0E-57	11545732	NT	Homo sapiens SH3-domain binding protein 1 (SH3BP1), mRNA
9622	19188	25251	1.39	8.0E-57	11545732	NT	Homo sapiens SH3-domain binding protein 1 (SH3BP1), mRNA
2592	12462	22353	2.02	7.0E-57	7657592	NT	Homo sapiens smg GDS-ASSOCIATED PROTEIN (SMAP), mRNA
2592	12462	22354	2.02	7.0E-57	7657592	NT	Homo sapiens smg GDS-ASSOCIATED PROTEIN (SMAP), mRNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3212	13136	22937	0.92	7.0E-57	7242158	NT	Homo sapiens NME7 (NME7), mRNA
3212	13136	22938	0.92	7.0E-57	7242158	NT	Homo sapiens NME7 (NME7), mRNA
3233	13157	22956	6.49	7.0E-57	6005979	NT	Homo sapiens Kruppel-like factor 8 (KLF8), mRNA
3801	13713	23500	2.17	7.0E-57	AF012872.1	NT	Homo sapiens phosphatidylinositol 4-kinase 230 (pi4K230) mRNA, complete cds
3801	13713	23501	2.17	7.0E-57	AF012872.1	NT	Homo sapiens phosphatidylinositol 4-kinase 230 (pi4K230) mRNA, complete cds
9934	19656		2.99	5.0E-57	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
3694	13608	23393	1.23	4.0E-57	AB029898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
4935	14813	24581	0.96	4.0E-57	BE783649.1	EST_HUMAN	601471226F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3874135 5'
787	10716	20558	0.79	3.0E-57	4507798	NT	Homo sapiens ubiquitin protein ligase E3A (human papilloma virus E6-associated protein, Angelman syndrome) (UBE3A) mRNA
1309	11215		11.34	3.0E-57	AA230279.1	EST_HUMAN	nc13f07.s1 NCI_CGAP_P1 Homo sapiens cDNA clone IMAGE:1008037 similar to SW:RS10_HUMAN
2342	12222	22119	2.83	3.0E-57	AA348335.1	EST_HUMAN	P46783 40S RIBOSOMAL PROTEIN S10. ;
2670	12535	22425	1.62	3.0E-57	BE676622.1	EST_HUMAN	EST54770 Hippocampus II Homo sapiens cDNA 5' end
2670	12535	22426	1.62	3.0E-57	BE676622.1	EST_HUMAN	7f33b10.x1 NCI_CGAP_CELL1 Homo sapiens cDNA clone IMAGE:3296443 3' similar to WP:Y47H9C.2
3514	13430	23230	1.15	3.0E-57	AF232708.1	NT	7f33b10.x1 NCI_CGAP_CELL1 Homo sapiens cDNA clone IMAGE:3296443 3' similar to WP:Y47H9C.2
3639	13563		115.94	3.0E-57	AW833064.1	EST_HUMAN	Homo sapiens cell-line tsA201a chloride ion current inducer protein (Cln) gene, complete cds
5723	15630	25733	3.34	3.0E-57	BE795637.1	EST_HUMAN	RC3-C10254-110300-027-d10 CT0254 Homo sapiens cDNA
6736	16615	26805	3.95	3.0E-57	W28130.1	EST_HUMAN	601589896F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3944302 5'
6751	16630	26817	1.95	3.0E-57	11545798	NT	42f6 Human retina cDNA randomly primed sublibrary Homo sapiens cDNA
6751	16630	26818	1.95	3.0E-57	11545798	NT	Homo sapiens hypothetical protein FLJ11656 (FLJ11656), mRNA
7142	17019	27212	4.65	3.0E-57	AU117659	EST_HUMAN	Homo sapiens hypothetical protein FLJ11656 (FLJ11656), mRNA
8279	18159	28400	20.31	3.0E-57	AW248374.1	EST_HUMAN	AU117659 HEMBA1 Homo sapiens cDNA clone HEMBA1001910 5'
9247	19721	24907	5.2	3.0E-57	W23871.1	EST_HUMAN	2820473.5prime NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2820473 5'
9608	19628		2.15	3.0E-57	AW178575.1	EST_HUMAN	zb45d11.r1 Soares fetal lung NBHL19W Homo sapiens cDNA clone IMAGE:306549 5'
2699	12563	22453	1.19	2.0E-57	AA845419.1	EST_HUMAN	RC0-HT0112-080999-001-C06 HT0112 Homo sapiens cDNA
3392	13309		2.91	2.0E-57	AL163204.2	NT	ak02b02.s1 Soares parathyroid tumor NbrIPA Homo sapiens cDNA clone IMAGE:1404747 3' similar to
3504	13421	23223	0.84	2.0E-57	R07702.1	EST_HUMAN	contains Alu repetitive element; contains element MER22 repetitive element ;
3504	13421	23224	0.84	2.0E-57	R07702.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C004
4409	14303	24086	6.88	2.0E-57	AL163283.2	NT	ye98h01.r1 Soares fetal liver spleen 1NFSL Homo sapiens cDNA clone IMAGE:125809 5'
							ye98h01.r1 Soares fetal liver spleen 1NFSL Homo sapiens cDNA clone IMAGE:125809 5'

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## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5478	15398		1.43	2.0E-57	AA016131.1	EST_HUMAN	ze31c05.r1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:360584 5' similar to contains L1.13 L1 repetitive element;
5676	15585		28.14	2.0E-57	BF115286.1	EST_HUMAN	7n80f04.x1 NCI_CGAP_Ov18 Homo sapiens cDNA clone IMAGE:3570966 3' similar to contains TAR1.11 MER22 repetitive element;
7017	16894	27084	1.29	2.0E-57	AF045452.1	NT	Homo sapiens cell-line KG1 transcriptional regulatory protein p54 mRNA, complete cds
7665	17515	27742	1.71	2.0E-57	AF057722.1	NT	Homo sapiens 17-beta-hydroxysteroid dehydrogenase IV (HSD17B4) gene, exons 3 and 4
8592	18460	28729	2.22	2.0E-57	11424084	NT	Homo sapiens hypothetical protein FLJ20041 (FLJ20041), mRNA
8592	18460	28730	2.22	2.0E-57	11424084	NT	Homo sapiens hypothetical protein FLJ20041 (FLJ20041), mRNA
2184	12071	21973	1.12	1.0E-57	AW503208.1	EST_HUMAN	UHF-BN0-akt-g-07-0-U1.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3078348 5'
7045	16922		2.08	1.0E-57	BE043031.1	EST_HUMAN	hc32a08.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3039062 3' similar to TR:O00246 O00246 HYPOTHETICAL 9.3 KD PROTEIN;
9401	19055		3.47	1.0E-57	AW470791.1	EST_HUMAN	ha33d06.x1 NCI_CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2875499 3' similar to contains THR.b3 THR repetitive element;
9663	19223	25238	1.43	9.0E-58	BE395061.1	EST_HUMAN	601309465F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3631000 5'
574	10512		1.41	8.0E-58	BE3668715.1	EST_HUMAN	601445948F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3650211 5'
638	10575	20389	2.62	8.0E-58	AI798376.1	EST_HUMAN	tr34b07.x1 NCI_CGAP_Ov23 Homo sapiens cDNA clone IMAGE:2220181 3' similar to TR:O15475 O15475 UNNAMED HERV-H PROTEIN;
638	10575	20390	2.62	8.0E-58	AI798376.1	EST_HUMAN	tr34b07.x1 NCI_CGAP_Ov23 Homo sapiens cDNA clone IMAGE:2220181 3' similar to TR:O15475 O15475 UNNAMED HERV-H PROTEIN;
1813	11710	21588	2.23	8.0E-58	11434921	NT	Homo sapiens putative protein O-mannosyltransferase (POMT2), mRNA
1813	11710	21589	2.23	8.0E-58	11434921	NT	Homo sapiens putative protein O-mannosyltransferase (POMT2), mRNA
2945	12872		2.83	8.0E-58	7706132	NT	Homo sapiens DHHC1 protein (LOC51304), mRNA
8231	18112		5.61	7.0E-58	5174542	NT	Homo sapiens MADS box transcription enhancer factor 2, polypeptide B (myocyte enhancer factor 2B) (MEF2B) mRNA
8300	18179	28425	3.25	7.0E-58	AW504109.1	EST_HUMAN	UHF-BN0-alk-g-10-0-U1.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3079867 5'
8300	18179	28426	3.25	7.0E-58	AW504109.1	EST_HUMAN	UHF-BN0-alk-g-10-0-U1.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3079867 5'
2207	12094	21997	0.9	6.0E-58	BE395061.1	EST_HUMAN	601309465F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3631000 5'
2324	12205	22105	2.96	6.0E-58	AU130689.1	EST_HUMAN	AU130689 NT2RP3 Homo sapiens cDNA clone NT2RP3001263 5'
2871	12798	22592	1.19	6.0E-58	BE242150.1	EST_HUMAN	TCAAP1E1219 Pediatric acute myelogenous leukemia cell (FAB M1) Baylor-HGSC project=TCAA Homo sapiens cDNA clone TCAAP1219
2871	12798	22593	1.19	6.0E-58	BE242150.1	EST_HUMAN	TCAAP1E1219 Pediatric acute myelogenous leukemia cell (FAB M1) Baylor-HGSC project=TCAA Homo sapiens cDNA clone TCAAP1219
7909	17759	28000	1.3	6.0E-58	11434746	NT	Homo sapiens protein tyrosine phosphatase, non-receptor type 21 (PTPN21), mRNA
9492	19109		1.8	6.0E-58	11526291	NT	Homo sapiens hypothetical protein FLJ20454 (FLJ20454), mRNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
297	10261	20081	2.9	5.0E-58	4507334	NT	Homo sapiens synaptotagmin 1 (SYNJ1), mRNA
693	10626	20451	5.87	5.0E-58	BE763984.1	EST_HUMAN	RC4-NT0057-160600-016-005 NT0057 Homo sapiens cDNA
1176	11088	20932	4.47	5.0E-58	AW797948.1	EST_HUMAN	CM3-UM0043-240300-127-e07 UM0043 Homo sapiens cDNA
1176	11088	20933	4.47	5.0E-58	AW797948.1	EST_HUMAN	CM3-UM0043-240300-127-e07 UM0043 Homo sapiens cDNA
1177	11088	20932	2.99	5.0E-58	AW797948.1	EST_HUMAN	CM3-UM0043-240300-127-e07 UM0043 Homo sapiens cDNA
1177	11088	20933	2.99	5.0E-58	AW797948.1	EST_HUMAN	CM3-UM0043-240300-127-e07 UM0043 Homo sapiens cDNA
3281	13202	23002	3.56	5.0E-58	AA988183.1	EST_HUMAN	cr98e07.s1 NCL_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1603908 3'
5458	15378		2.21	5.0E-58	11496282	NT	Homo sapiens placenta-specific 1 (PLAC1), mRNA
5748	15656	25764	5.86	5.0E-58	H23072.1	EST_HUMAN	ym51h07.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:52071 5'
5894	15800	25924	1.45	5.0E-58	11421330	NT	Homo sapiens apical protein, Xenopus laevis-like (APXL), mRNA
6647	16527	28721	6.77	5.0E-58	8922693	NT	Homo sapiens hypothetical protein FLJ10826 (FLJ10826), mRNA
7829	17679	27923	1.56	5.0E-58	AL163218.2	NT	Homo sapiens chromosome 21 segment HS21C018
9215	19650		3.26	5.0E-58	11526293	NT	Homo sapiens cat eye syndrome chromosome region, candidate 1 (CECR1), mRNA
9876	19362		2.49	5.0E-58	11418177	NT	Homo sapiens Ran GTPase activating protein 1 (RANGAP1), mRNA
369	10325	20147	17.97	4.0E-58	4502302	NT	Homo sapiens ATP synthase, H+ transporting, mitochondrial F1 complex, O subunit (oligomycin sensitivity conferring protein) (ATP5O), mRNA
779	10709	20548	1.58	4.0E-58	4504634	NT	Homo sapiens interleukin 10 receptor, beta (IL10RB), mRNA
1452	11357	21221	1.24	4.0E-58	4503648	NT	Homo sapiens coagulation factor IX (plasma thromboplastic component, Christmas disease, hemophilia B) (F9) mRNA
2531	12405	22297	0.97	4.0E-58	AF265555.1	NT	Homo sapiens ubiquitin-conjugating BIR-domain enzyme APOLLON mRNA, complete cds
2590	12461	22851	2.7	4.0E-58	U96251.1	NT	Human beta-prime-adaptin (BAM22) gene, exon 3
3283	13204	23004	1.1	4.0E-58	D16470.1	NT	Human mRNA, Xq terminal portion
3680	13594	23380	2.11	4.0E-58	5031660	NT	Homo sapiens EGF-like repeats and discoidin I-like domains 3 (EDIL3), mRNA
8651	18515	28798	7.54	4.0E-58	11424059	NT	Homo sapiens E1B-55kDa-associated protein 5 (E1B-AP5), mRNA
332	10291		1.17	3.0E-58	R17879.1	EST_HUMAN	yg10e02.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:31693 5'
1367	11273	21129	2.34	3.0E-58	4758981	NT	Homo sapiens peptide YY (PYY) mRNA
3141	13066	22864	2.91	3.0E-58	BF569848.1	EST_HUMAN	6021857789F1 NIH_MGC_45 Homo sapiens cDNA clone IMAGE:4309943 5'
3141	13066	22865	2.91	3.0E-58	BF569848.1	EST_HUMAN	6021857789F1 NIH_MGC_45 Homo sapiens cDNA clone IMAGE:4309943 5'
6002	15907	26031	1.39	3.0E-58	AV712977.1	EST_HUMAN	AV712977 DCA Homo sapiens cDNA clone DCAAZG04 5'
925	10850	20598	8.16	2.0E-58	AF069624.1	NT	Homo sapiens 5-aminolevulinate synthase 2 (ALAS2) gene, complete cds
1268	11175		12.06	2.0E-58	BE208532.1	EST_HUMAN	ba08b07.y1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:2823733 5' similar to gb:X69391.60S
5288	19441	24986	4.42	2.0E-58	BE907186.1	EST_HUMAN	RIBOSOMAL PROTEIN L6 (HUMAN); gb:X81987 M.musculus mRNA for TAX responsive element binding protein (MOUSE);
						EST_HUMAN	601469961F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3901911 5'

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5288	19441	25010	4.42	2.0E-58	BE907186.1	EST_HUMAN	601499961F1 NIH_MGC_70 Homo sapiens cDNA clone IMAGE:3901911 5'
							am57602.x1 Johnson frontal cortex Homo sapiens cDNA clone IMAGE:1539674 3' similar to WP:ZK328.1 CE05065 UBIQUITIN CONJUGATING ENZYME1; RECOVERIN SUBFAMILY OF EF-HAND CALCIUM BINDING PROTEIN;
5721	15628	25731	1.74	2.0E-58	A1124874.1	EST_HUMAN	Homo sapiens endocytic receptor Endo180 (ENDO180) mRNA, complete cds
6246	16112	26263	2.76	2.0E-58	AF134838.1	NT	Homo sapiens endocytic receptor Endo180 (ENDO180) mRNA, complete cds
6246	16112	26264	2.76	2.0E-58	AF134838.1	NT	Homo sapiens endocytic receptor Endo180 (ENDO180) mRNA, complete cds
8123	18011	28258	10.79	2.0E-58	BF30745.1	EST_HUMAN	601890812F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4131891 5'
8332	18209	28459	2.26	2.0E-58	AW872641.1	EST_HUMAN	hm25f08.x1 NCI_CGAP_Thy4 Homo sapiens cDNA clone IMAGE:3013671 3'
705	10638	20463	0.93	1.0E-58	M65134.1	NT	Human complement component C5 mRNA, 3'end
1052	10989	20811	5.45	1.0E-58	6274549	NT	Homo sapiens NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 9 (22kD, B22) (NDUFB9), mRNA
1305	11212	21067	2.17	1.0E-58	AW957182.1	EST_HUMAN	EST T369252 MAGE resequences, MAGD Homo sapiens cDNA
1305	11212	21068	2.17	1.0E-58	AW957182.1	EST_HUMAN	EST T369252 MAGE resequences, MAGD Homo sapiens cDNA
1375	11281	21136	1.07	1.0E-58	AJ238093.1	NT	Homo sapiens partial AF-4 gene, exons 2 to 7 and Alu repeat elements
1641	11545	21406	2.02	1.0E-58	BE466132.1	EST_HUMAN	hy10f08.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:3196935 3'
2771	12633	22527	0.96	1.0E-58	4759169	NT	Homo sapiens sterol regulatory element binding transcription factor 2 (SREBF2) mRNA
3493	13409	23215	0.98	1.0E-58	4758081	NT	Homo sapiens chondroitin sulfate proteoglycan 2 (versican) (CSPG2) mRNA
3493	13409	23216	0.98	1.0E-58	4758081	NT	Homo sapiens chondroitin sulfate proteoglycan 2 (versican) (CSPG2) mRNA
3659	13573	23360	0.84	1.0E-58	4507628	NT	Homo sapiens transition protein 1 (during histone to protamine replacement) (TNP1) mRNA
4627	14515	24306	0.89	1.0E-58	M95953.1	NT	Human prothormone converting enzyme (NEC2) gene, exon 4
4855	14775	24553	4.86	1.0E-58	A1141063.1	EST_HUMAN	oz43h01.x1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:1678129 3'
7146	17023	27217	6.7	1.0E-58	4505314	NT	Homo sapiens myomesin (M-protein) 2 (165kD) (MYOM2), mRNA
8985	18790		3.46	1.0E-58	X83392.1	NT	H. sapiens immunoglobulin kappa light chain variable region L14
2182	12069	21971	27.47	8.0E-59	4507378	NT	Homo sapiens TATA box binding protein (TBP) mRNA
6759	16638	28826	1.2	8.0E-59	A1761963.1	EST_HUMAN	wh50d06.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2384171 3'
171	12680		1.63	6.0E-59	BF035327.1	EST_HUMAN	601458831F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3862086 5'
3088	13015	22807	6.21	5.0E-59	A1807484.1	EST_HUMAN	wf48c11.x1 Soares_NFL_I_GBC_S1 Homo sapiens cDNA clone IMAGE:2358836 3'
4559	14451	24237	5.85	5.0E-59	X83497.1	NT	H. sapiens DNA for ZNF80-linked ERV9 long terminal repeat
6173	15130	24850	7.46	5.0E-59	AW162304.1	EST_HUMAN	au66c07.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2781228 3' similar to contains element TAR1 repetitive element;
7596	17447	27662	1.71	5.0E-59	AV762869.1	EST_HUMAN	AV762869 MDS Homo sapiens cDNA clone MDSEIC12 5'
8278	18158	28399	2.8	5.0E-59	11434908	NT	Homo sapiens hypothetical protein (LOC57143), mRNA
776	10706	20546	2.42	4.0E-59	D80006.1	NT	Human mRNA for KIAA0184 gene, partial cds
4685	14571	24368	1.2	4.0E-59	4506768	NT	Homo sapiens ryanodine receptor 3 (RYR3) mRNA

Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4685	14571	24369	1.2	4.0E-59	4506768	NT	Homo sapiens ryanodine receptor 3 (RYR3) mRNA
9356	19586		2.16	4.0E-59	AF057720.1	NT	Homo sapiens 17-beta-hydroxysteroid dehydrogenase IV (HSD17B4) gene, promoter region and exon 1
9	9995		5.96	3.0E-59	AW965524.1	EST_HUMAN	EST377582 MAGE resequences, MAGI Homo sapiens cDNA
221	10191	20002	4.12	3.0E-59	7662247	NT	Homo sapiens KIAA0680 gene product (KIAA0680), mRNA
1682	11584	21455	9.87	3.0E-59	4505860	NT	Homo sapiens plasminogen activator, tissue (PLATa) mRNA
1682	11584	21456	9.87	3.0E-59	4505860	NT	Homo sapiens plasminogen activator, tissue (PLATa) mRNA
2082	11972	21866	7.68	3.0E-59	AB029035.1	NT	Homo sapiens mRNA for KIAA1112 protein, partial cds
2082	11972	21867	7.68	3.0E-59	AB029035.1	NT	Homo sapiens mRNA for KIAA1112 protein, partial cds
3090	13017	22811	3.71	3.0E-59	4502014	NT	Homo sapiens A kinase (PRKA) anchor protein 1 (AKAP1), mRNA
3090	13017	22812	3.71	3.0E-59	4502014	NT	Homo sapiens A kinase (PRKA) anchor protein 1 (AKAP1), mRNA
3753	13666	23449	1.17	3.0E-59	4508044	NT	Homo sapiens zona pellucida glycoprotein 2 (sperm receptor) (ZP2) mRNA
4683	14569	24366	1.07	3.0E-59	4759329	NT	Homo sapiens Testis-specific XK-related protein on Y (XKRY) mRNA
4734	14619	24406	1.85	3.0E-59	7427522	NT	Homo sapiens protein tyrosine phosphatase, receptor type, T (PTPRT), mRNA
5772	15679	25786	2.03	3.0E-59	8924074	NT	Homo sapiens hypothetical protein PRO1741 (PRO1741), mRNA
6382	16215	26377	1.82	3.0E-59	5454137	NT	Homo sapiens nuclear receptor co-repressor 1 (NCOR1), mRNA
6629	16509	26697	1.23	3.0E-59	X12556.1	NT	Human mRNA for dbl proto-oncogene
6629	16509	26698	1.23	3.0E-59	X12556.1	NT	Human mRNA for dbl proto-oncogene
9333	19014		1.84	3.0E-59	11417866	NT	Homo sapiens gamma-glutamyltransferase-like activity.1 (GGTLA1), mRNA
9474	19101		3.9	3.0E-59	11417866	NT	Homo sapiens gamma-glutamyltransferase-like activity.1 (GGTLA1), mRNA
7555	17406		5.01	2.0E-59	AA309774.1	EST_HUMAN	EST180633 Jurkat T-cells V Homo sapiens cDNA 5' end
8003	17853		2.47	2.0E-59	BF365554.1	EST_HUMAN	RCO-NT0036-100700-032-a07 NT0036 Homo sapiens cDNA
8205	18089	28341	1.84	2.0E-59	AW410698.1	EST_HUMAN	fr07h04.x1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:2961654 5'
8205	18089	28342	1.84	2.0E-59	AW410698.1	EST_HUMAN	fr07h04.x1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:2961654 5'
9235	18953	25359	5.14	2.0E-59	AI631809.1	EST_HUMAN	wa36c12.x1 NCI_CGAP_Kid111 Homo sapiens cDNA clone IMAGE:2300182 3' similar to TR:Q86542
9756	19611	24997	2.75	2.0E-59	L11645.1	NT	Q86542 RTVL-H PROTEIN, contains LTR7.b1 LTR7 repetitive element;
157	10131		3.58	1.0E-59	BE296411.1	EST_HUMAN	Homo sapiens alpha-tubulin mRNA, complete cds
2575	12446		2.46	1.0E-59	AA748468.1	EST_HUMAN	601176757F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3531927 5'
6463	16322	26488	1.29	1.0E-59	AJ130894.1	NT	oa56h11.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1309029 3' similar to TR:Q13537
7400	17318	27524	1.22	1.0E-59	11419630	NT	Q13537 MER37 TRANSPOSABLE ELEMENT, COMPLETE CONSENSUS SEQUENCE.;
8229	16322	26468	8.32	1.0E-59	AJ130894.1	NT	Homo sapiens mRNA for transcription factor
1455	11360	21224	2.71	8.0E-60	4759159	NT	Homo sapiens small nuclear ribonucleoprotein D3 polypeptide (18kD) (SNRNP3) mRNA

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Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2125	12013	21911	2.7	8.0E-60	5174656	NT	Homo sapiens differentiation-related gene 1 (nickel-specific induction protein) (RTP) mRNA
2125	12013	21912	2.7	8.0E-60	5174656	NT	Homo sapiens differentiation-related gene 1 (nickel-specific induction protein) (RTP) mRNA
5640	15553	25645	1.41	8.0E-60	AB029004.1	NT	Homo sapiens mRNA for KIAA1081 protein, partial cds
6644	16524	26718	2.6	8.0E-60	X17033.1	NT	Human mRNA for integrin alpha-2 subunit
7174	17051	27240	2.26	8.0E-60	11428949	NT	Homo sapiens S-antigen; retina and pineal gland (arrestin) (SAG) mRNA
7451	17260	27465	1.68	8.0E-60	11417118	NT	Homo sapiens KIAA0433 protein (KIAA0433), mRNA
7451	17260	27466	1.68	8.0E-60	11417118	NT	Homo sapiens KIAA0433 protein (KIAA0433), mRNA
8207	18091	28344	5.38	8.0E-60	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
8207	18091	28345	5.38	8.0E-60	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
737	10669	20504	6.69	7.0E-60	AF055066.1	NT	Homo sapiens MHC class 1 region
738	10669	20504	32.94	7.0E-60	AF055066.1	NT	Homo sapiens MHC class 1 region
798	10727	20567	1.15	7.0E-60	4504634	NT	Homo sapiens interleukin 10 receptor, beta (IL10RB), mRNA
2081	11971	21865	1.56	7.0E-60	AF077188.1	NT	Homo sapiens cullin 4A (CUL4A) mRNA, complete cds
4088	13988	23765	2.63	7.0E-60	4505488	NT	Homo sapiens ornithine decarboxylase 1 (ODC1) mRNA
7412	17279	27488	3.28	7.0E-60	H58041.1	EST_HUMAN	yr12f04.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:205087 5' similar to contains LTR5 repetitive element ;
8671	18559	28843	1.96	7.0E-60	H58041.1	EST_HUMAN	yr12f04.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:205087 5' similar to contains LTR5 repetitive element ;
6914	16792		7.13	6.0E-60	H52456.1	EST_HUMAN	yq78h09.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:201953 5' similar to contains ORF repetitive element ;
78	10062	19878	1.94	5.0E-60	AB07917.1	EST_HUMAN	wf52c07.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2359212 3'
78	10062	19879	1.94	5.0E-60	AB07917.1	EST_HUMAN	wf52c07.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2359212 3'
2188	12075	21979	0.93	4.0E-60	AW503208.1	EST_HUMAN	UI-HF-BN0-akt-g-07-0-J1.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3078348 5'
2188	12075	21980	0.93	4.0E-60	AW503208.1	EST_HUMAN	UI-HF-BN0-akt-g-07-0-J1.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3078348 5'
2942	12869		1.12	4.0E-60	AA299037.1	EST_HUMAN	EST11498 Uterus Homo sapiens cDNA 5' end similar to similar to retrovirus-related pol
1815	11712	21591	4.85	3.0E-60	BE562611.1	EST_HUMAN	601336446f1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3690395 5'
1815	11712	21592	4.85	3.0E-60	BE562611.1	EST_HUMAN	601336446f1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3690395 5'
1826	11723		2.22	3.0E-60	6031190	NT	Homo sapiens profilin (PHB) mRNA
4354	14250	24035	2.08	3.0E-60	AJ271735.1	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
5463	15383	25443	2.06	3.0E-60	AW636196.1	EST_HUMAN	RC3-L T0023-200100-012-a01 L T0023 Homo sapiens cDNA
6153	15111	24875	1.31	3.0E-60	A1792814.1	EST_HUMAN	ol60h11.y6 NCI_CGAP_Kid3 Homo sapiens cDNA clone IMAGE:1534053 5' similar to SW:UDP_MOUSE P52824 URIDINE PHOSPHORYLASE ;
6996	16775	26968	5.4	3.0E-60	5174644	NT	Homo sapiens proline dehydrogenase (proline oxidase) (PRODH) mRNA
6996	16775	26969	5.4	3.0E-60	5174644	NT	Homo sapiens proline dehydrogenase (proline oxidase) (PRODH) mRNA



Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6990	16867	27061	2.59	3.0E-60	AI040235.1	EST_HUMAN	ox56d09.x1 Soares_NHMPu_S1 Homo sapiens cDNA clone IMAGE:1660337 3' similar to SW:FORM_MOUSE_Q05860 FORMIN ;
7077	16954	27147	4.7	3.0E-60	5174644	NT	Homo sapiens proline dehydrogenase (proline oxidase) (PRODH) mRNA
7569	17420	27637	3.84	3.0E-60	BF102612.1	EST_HUMAN	601646227F1 NIH_MGC_60 Homo sapiens cDNA clone IMAGE:3930990 5'
28	10075	19810	1.79	2.0E-60	AY008285.1	NT	Homo sapiens solute carrier (SLC25A18) mRNA, complete cds; nuclear gene for mitochondrial product
1405	11310	21171	2.89	2.0E-60	Z11694.1	NT	H.sapiens 41kDa protein kinase related to rat ERK2
1691	11593	21462	1.29	2.0E-60	M24603.1	NT	Human bor protein mRNA, 5' end
3839	13750	23543	0.78	2.0E-60	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
5910	15816	25941	1.57	2.0E-60	AF004877.1	NT	Homo sapiens pro-alpha 2(I) collagen (COL1A2) gene, complete cds
6093	15103	24880	2.44	2.0E-60	4503044	NT	Homo sapiens corticotroph releasing hormone receptor 2 (CRHR2) mRNA
6093	15103	24881	2.44	2.0E-60	4503044	NT	Homo sapiens corticotroph releasing hormone receptor 2 (CRHR2) mRNA
6222	16088	26238	3.22	2.0E-60	AA311159.1	EST_HUMAN	EST181949 Jurkat T-cells V Homo sapiens cDNA 5' end similar to prothymosin, alpha
6222	16088	26239	3.22	2.0E-60	AA311159.1	EST_HUMAN	EST181949 Jurkat T-cells V Homo sapiens cDNA 5' end similar to prothymosin, alpha
7145	17022	27216	3.86	2.0E-60	L36033.1	NT	Human pre-B cell stimulating factor homologue (SDF1b) mRNA, complete cds
7732	17592	27806	1.89	2.0E-60	11991659	NT	Homo sapiens sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6A (SEMA6A), mRNA
7732	17592	27807	1.89	2.0E-60	11991659	NT	Homo sapiens sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6A (SEMA6A), mRNA
9509	19123		2.86	2.0E-60	11418192	NT	Homo sapiens non-histone chromosome protein 2 (S. cerevisiae)-like 1 (NHP2L1), mRNA
9639	19573		1.31	2.0E-60	AF068757.1	NT	Homo sapiens somatostatin receptor subtype 3 (SSTR3) gene, 5' flanking region and partial cds
9641	19209		1.46	2.0E-60	11418068	NT	Homo sapiens similar to HSPC022 protein (H. sapiens) (LOC63504), mRNA
9668	19220		1.47	2.0E-60	AB011399.1	NT	Homo sapiens gene for AF-6, complete cds
9957	19420	25169	1.4	2.0E-60	11418157	NT	Homo sapiens calcium channel, voltage-dependent, alpha 1I subunit (CACNA1I), mRNA
511	10453	20264	1.56	1.0E-60	BE175586.1	EST_HUMAN	PM3-HT0605-270200-001-e06 HT0605 Homo sapiens cDNA
3827	13739	23531	1.12	1.0E-60	AJ143389.1	EST_HUMAN	AJ143389 Y79AA1 Homo sapiens cDNA clone Y79AA1001854 5'
4874	14754	24533	1.1	1.0E-60	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
7086	16963		2.9	1.0E-60	AA244041.1	EST_HUMAN	nc04er12.1 NCL_CGAP_P11 Homo sapiens cDNA clone IMAGE:1007182 similar to contains L1.t1 L1 repetitive element ;
7101	16978	27170	1.58	1.0E-60	AV754081	EST_HUMAN	AV754081 TP Homo sapiens cDNA clone TPGAED05 5'
1083	10999	20840	1.9	9.0E-61	AJ119344.1	EST_HUMAN	AJ119344 HEMBA1 Homo sapiens cDNA clone HEMBA1005583 5'
2635	12502	22395	1.39	8.0E-61	AW006478.1	EST_HUMAN	wf05b10.x1 NCL_CGAP_Co3 Homo sapiens cDNA clone IMAGE:2506555 3'
2635	12502	22396	1.39	8.0E-61	AW006478.1	EST_HUMAN	wf05b10.x1 NCL_CGAP_Co3 Homo sapiens cDNA clone IMAGE:2506555 3'
2921	12848		1.74	8.0E-61	X57147.1	NT	Human endogenous retrovirus pHE.1 (ERV9)

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Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
122	10098	19918	0.94	7.0E-61	7706670	NT	Homo sapiens PXR2b protein (PXR2b), mRNA
122	10098	19919	0.94	7.0E-61	7706670	NT	Homo sapiens PXR2b protein (PXR2b), mRNA
123	10098	19918	0.86	7.0E-61	7706670	NT	Homo sapiens PXR2b protein (PXR2b), mRNA
123	10098	19919	0.86	7.0E-61	7706670	NT	Homo sapiens PXR2b protein (PXR2b), mRNA
265	10230	20045	2	6.0E-61	BE409310.1	EST_HUMAN	601300938F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3635480 5'
794	10723	20564	1.69	6.0E-61	BE409310.1	EST_HUMAN	601300938F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3635480 5'
1299	11206	21060	10.28	6.0E-61	AF119860.1	NT	Homo sapiens PRO2014 mRNA, complete cds
1612	11516	21376	0.95	6.0E-61	BE257400.1	EST_HUMAN	601109238F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3350145 5'
1628	11532	21392	2.12	6.0E-61	AA596033.1	EST_HUMAN	nm68093.s1 NCI_CGAP_Lar1 Homo sapiens cDNA clone IMAGE:1088897 3'
3266	13189	22987	8.19	6.0E-61	AU130689.1	EST_HUMAN	AU130689 NT2RP3 Homo sapiens cDNA clone NT2RP3001263 5'
5674	15583	25684	2.92	6.0E-61	S79249.1	NT	Ig-beta/B29=CD79b (alternatively spliced) [human, B cells, mRNA Partial, 375 nt]
6344	16207	26370	1.93	6.0E-61	U24498.1	NT	Human autosomal dominant polycystic kidney disease protein 1 (PKD1) gene
6492	16351	26521	2.03	6.0E-61	AF035737.1	NT	Homo sapiens general transcription factor 2-1 (GTF2) mRNA, complete cds
9417	10723	20564	1.43	6.0E-61	BE409310.1	EST_HUMAN	601300938F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3635480 5'
1655	11558	21421	1.78	5.0E-61	4506008	NT	Homo sapiens protein phosphatase 1, regulatory subunit 10 (PPP1R10) mRNA
3000	12928	22720	1.92	5.0E-61	AL163279.2	NT	Homo sapiens chromosome 21 segment HS21C079
3114	13039	22835	0.84	5.0E-61	AB020632.1	NT	Homo sapiens mRNA for KIAA0825 protein, partial cds
3161	13086	22890	1.9	5.0E-61	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
3899	13809		1.68	5.0E-61	AJ29041.1	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22; segment 1/3
9213	18941		2.76	4.0E-61	AV731140.1	EST_HUMAN	AV731140 HTF Homo sapiens cDNA clone HTFARB01 5'
4119	14019	23797	1.13	3.0E-61	BE396279.1	EST_HUMAN	6013009785F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3631220 5'
490	10433	20246	1.5	2.0E-61	8922829	NT	Homo sapiens hypothetical protein FLJ11026 (FLJ11026), mRNA
1194	11104	20950	1.35	2.0E-61	BE168410.1	EST_HUMAN	QV3-HT0513-060400-147-d01 HT0513 Homo sapiens cDNA
1194	11104	20951	1.35	2.0E-61	BE168410.1	EST_HUMAN	QV3-HT0513-060400-147-d01 HT0513 Homo sapiens cDNA
1642	11546	21407	1.31	2.0E-61	N53039.1	EST_HUMAN	yv53d11.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:246453 3' similar to gb:L25444 60S RIBOSOMAL PROTEIN L35A (HUMAN);
2109	11998	21897	1.41	2.0E-61	4759003	NT	Homo sapiens calnexin (CLGN), mRNA
2604	12472		1.16	2.0E-61	N39397.1	EST_HUMAN	yv03f11.r1 Soares melanocyte 2Nblm Homo sapiens cDNA clone IMAGE:270189 5'
5871	15777	25896	1.7	2.0E-61	11426166	NT	Homo sapiens ATPase, H+ transporting, lysosomal (vacuolar proton pump) non-catalytic accessory protein 1A (110116kd) (ATP6N1A), mRNA
7212	17089	27279	1.33	2.0E-61	AV694317.1	EST_HUMAN	AV694317 GKc Homo sapiens cDNA clone GKCELG06 5'
7707	17557	27783	1.62	2.0E-61	AW500266.1	EST_HUMAN	U1-HF-BNO-akd-f-12-Q-U1.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3076774 5'
7885	17735	27979	3.09	2.0E-61	11421778	NT	Homo sapiens polymerase (RNA) III (DNA directed) (39kd) (RPC39), mRNA